1 APPENDIX 1.A
2 EVALUATION OF SPECIES CONSIDERED FOR COVERAGE

ADMINISTRATIVE DRAFT

BAY DELTA CONSERVATION PLAN

3

6

7

8

9

1011

February 2012



## **Contents**

		Page
Appendix 1.A	Evaluation of Species Considered for Coverage	1.A-1
Table 1.A-1.	Evaluation of Special-Status Fish, Wildlife, and Plants Known or Likely to	
	Occur in the Plan Area for Coverage under the BDCP	1.A-2

Appendix 1.A **Evaluation of Species Considered for Coverage** 

- The table in this appendix presents results of the Bay Delta Conservation Plan (BDCP) evaluation of 234 special-status species to identify species proposed for coverage under the BDCP. Species considered for BDCP coverage are limited to special-status species that are known or believed to occur near the Plan Area. Special-status species meet one or more of the following criteria.
  - Are listed as threatened or endangered under the federal Endangered Species Act (ESA).
  - Are proposed or candidates for listing under ESA.
  - Are listed as threatened or endangered under the California Endangered Species Act (CESA).
- Are candidates for listing under CESA.

1

2

7

8

9

11

12

13

15

16

2021

2223

24

25

- Are California species of special concern.
- Are California fully protected species.
- Are U.S. Fish and Wildlife Service (USFWS) birds of conservation concern.
- Are National Marine Fisheries Service (NMFS) species of concern.
  - Are plants listed as rare under the California Native Plant Protection Act (NPPA).
  - Are plants included in the California Native Plant Society (CNPS) List 1A, 1B, or 2.
- The evaluation process uses four criteria to determine which special-status species are proposed for coverage under the BDCP.
- Listing status of the species.
  - Likelihood that the species is present in the Plan Area or other areas within the geographic scope.
  - Potential for the species to be adversely affected by BDCP covered activities, including the implementation of conservation measures.
  - Information available to determine effects on species and to identify effective conservation measures.
- Species that meet all four criteria are proposed for coverage under the BDCP, as indicated in Table 1.A-1 below.

Evaluation of Species Considered for Coverage Appendix 1.A

## Table 1.A-1. Evaluation of Special-Status Fish, Wildlife, and Plants Known or Likely to Occur in the Plan Area for Coverage under the BDCP

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient	Consider for Coverage?	Coverage Comments
1. Sacramento perch Archoplites interruptus	-/-/-	_	-	-	+	No	This species has been extirpated from the Plan Area and, therefore, is not recommended for coverage.
2. Tule perch, Sacramento subspecies Hysterocarpus traskii traskii	-/SSC/-	-	+	+ (AD, H, ID, O)	+	No	This species is not recommended for coverage. It has no federal or state status and is not likely to be listed. They are very common in large tributaries of the Sacramento River (e.g., American and Feather Rivers) and, in the San Joaquin watershed, have a persisting population in the Stanislaus River. The species appears to be in long-term decline in the San Francisco Estuary.
3. Steelhead, Central Valley DPS Oncorhynchus mykiss	T/-/-	+	+	(AD, H, ID, O)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
4. Chinook salmon, Sacramento River winter-run ESU Oncorhynchus tshawytscha	E/E/-	+	+	(AD, H, ID, 0)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
5. Chinook salmon, Central Valley spring- run ESU Oncorhynchus tshawytscha	T/T/-	+	+	+ (AD, H, ID, O)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
6. Chinook salmon, Central Valley fall-/late fall-run ESU Oncorhynchus tshawytscha	NSC /SSC/-	+	+	+ (ID, O)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.

1

Evaluation of Species Considered for Coverage Appendix 1.A

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
7. Longfin smelt Spirinchus thaleichthys	-/T/-	+	+	+ (AD, H, ID, O)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
8. Pacific smelt Thaleichthys pacificus	-1/SSC/-	+	U	U	+	No	This species is not recommended as a BDCP covered species. A 2007 petition to list the southern distinct population segment of pacific smelt under ESA¹ documented one source² reporting that the species may have been seen in the Sacramento River. However, numerous other available scientific sources³ state that the species range does not include the Sacramento–San Joaquin River watersheds.
9. Delta smelt Hypomesus transpacificus	T/T/-	+	+	(AD, H, ID, O)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
10. Hardhead Mylopharadon conocephalus	-/SSC/-	-	+	(AD, H, ID, O)	+	No	This species is not recommended for coverage under the BDCP. It has no federal or state status. The species is common throughout the Sacramento–San Joaquin watershed and is not likely to become listed. The species is widely distributed in foothill streams.

\_

<sup>1</sup> Cowlitz Indian Tribe. 2007. Petition to list the southern eulachon (*Thaleichthys pacificus*) distinct population segment as threatened or endangered under the federal endangered species act. November 9, 2007. Available at: <a href="http://www.nwr.noaa.gov/Other-Marine-Species/upload/Smelt\_Petition\_11\_07.pdf">http://www.nwr.noaa.gov/Other-Marine-Species/upload/Smelt\_Petition\_11\_07.pdf</a>>.

<sup>&</sup>lt;sup>2</sup> Minckley, W. L., D. A. Hendrickson, and C. E. Bond. 1986. Geography of western North American freshwater fishes: description and relationships to intracontinental tectonism, pp 519–613. In: *The Zoogeography of North American Freshwater Fishes*. Hocutt, C. H. and E. O. Wiley, editors. John Wiley and Sons. New York.

<sup>&</sup>lt;sup>3</sup> Eschmeyer, W.S., E.S. Herald, and H. Hammann. 1984. *A field guide to Pacific coast fishes of North America*. Houghton Mifflin Co., Boston, MA. 336 pp. McGinnis, S.M. 1984. *Freshwater Fishes of California*. University of California Press, Berkeley and Los Angeles, CA. 316 pp. Page, L.M. and B.M. Burr. 1991. *A field guide to freshwater fishes of North America north of Mexico*. Houghton Mifflin Co., Boston, MA. 432 pp. Moyle, P.B. 2002. *Inland Fishes of California*. University of California Press, Berkeley, CA. 503 pp.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
11. Sacramento splittail Pogonichthys macrolepidotus	-/SSC/-	+	+	+ (AD, H, ID, O)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
12. California roach, Sacramento-San Joaquin subspecies Lavinia symmetricus ssp. symmetricus	-/SSC/-	-	+	+ (AD, H, ID, O)	+	No	This species is not recommended for coverage under the BDCP. It has no federal or state status and is not likely to be listed. The subspecies is abundant in a large number of streams throughout the Sacramento–San Joaquin watershed, although it has been locally extirpated from many streams since 1970.
13. Hitch Lavinia exilicauda	-/SSC/-	-	+	+ (AD, H, ID, O)	+	No	This species is not recommended for coverage under the BDCP. It has no federal or state status and is not likely to be listed. The species has scattered populations throughout the Central Valley, from the Tulare Lake basin in the southern San Joaquin River drainage to the Shasta Reservoir in the northern Sacramento River drainage.
14. White sturgeon Acipenser transmontanus	-/-e/-	+	+	+ (AD, H, ID, 0)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
15. Green sturgeon, Southern DPS Acipenser medirostris	T/SSC/-	+	+	+ (AD, H, ID, 0)	+	Yes	Meets all four criteria. Identified as a covered species in the BDCP Planning Agreement.
16. Pacific lamprey Entosphenus tridentatus	-/-/-	+	+	+ (AD, ID, O)	+	Yes	Meets all four criteria. Although this species has no regulatory or conservation status, it has a similar life history characteristics to those of the river lamprey and populations are in decline. Potential effects could occur through water operations and in–Delta conveyance construction.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
17. River lamprey Lampetra ayresii	-/SSC/-	+	+	+ (AD, ID, O)	+	Yes	Meets all four criteria. This species is a state species of concern. It is a covered species under the Butte County HCP.
Mammals							
1. American badger Taxidea taxus	-/SSC/-	-	+	+ (AD)	+	No	Although a special-status species that has experienced local declines in some areas of the state, there is no indication that it has experienced declines sufficient to warrant listing over the term of the BDCP.  While there are no documented occurrences, this species could potentially occur in grassland habitats on and near the Stone Lakes National Wildlife Refuge and along the western edge of the Plan Area from Yolo County to San Joaquin County.
2. Ringtail  Bassariscus astutus	-/FP/-	+			+	No	The ringtail is a state Fully Protected species. It is being considered for coverage under the South Sacramento County HCP and the Yolo HCP/NCCP. While the species is known to occur in dense riparian woodlands, the limited extent of riparian habitat in the Plan Area limits the potential for occurrence and the potential for affect. The possible exception is the Cosumnes River Preserve east of Interstate 5 that would not be affected by covered activities.
3. San Joaquin kit fox Vulpes macrotis mutica	E/T/-	+	+	+ (AD)	+	Yes	Meets all four criteria. There is potential for affect if this species is found to occur in the grassland habitats along the western edge of the Plan Area between approximately Brentwood and Clifton Court Forebay.
4. Riparian woodrat Neotoma fuscipes riparia	E/SSC, SA/-	+	U	U (ID/AD/H)	+	Yes	Though it does not meet all four criteria, due to this species' rarity and dependence on limited specialized habitat that is found in the Plan Area, it is proposed for coverage under the BDCP. In addition to being a

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>		Consider for Coverage?	Coverage Comments
							state species of special concern, this species is also considered a Special Animal because it is included on the IUCN Red List as Critically Endangered. This species is also a covered species under the San Joaquin County HCP. This species is restricted to riparian habitats. While occurrence in the Plan Area is unknown, it is known to occur immediately adjacent to the Plan Area and there are patches of suitable habitat that potentially support this species.
5. Salt marsh harvest mouse Reithrodontomys ravivenstris	E/E,FP/-	+	+	+ (H)	+	Yes	Meets all four criteria. This species is also being considered as a covered species in the Solano HCP/NCCP.  This species is closely associated with tidal marsh habitats. It occurs in the western extreme of the Plan Area where restoration activities could affect occupied habitats.
6. San Joaquin pocket mouse Perognathus inornatus inornatus	-/SA/-		+	+ (ID, AD)	+	No	This species is considered a Special Animal by DFG because it is included on the IUCN Red List, under which it is designated as Least Concern. It has no legal or other conservation status. This species is a covered species under the San Joaquin County HCP. However, there is no other indication that this species would be listed during the timeframe of the plan and the potential for affecting this species is minimal. So, while this conflicts with the criteria that includes "covered under permits by other HCPs in northern California", it is not considered for coverage.  This species potentially occurs in grassland habitats on the western edge of the Plan Area where it could be affected by activities associates with conveyance construction.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
7. Berkeley kangaroo rat Dipodomys heermanni berkeleyensis	-/SA/-	+	-	-	+	No	This species is considered a Special Animal by DFG because it is included on the IUCN Red List, for which it is designated as Vulnerable. It has no legal or other conservation status. It is a covered species under the San Joaquin HCP.  This species has a very limited distribution and is known primarily from short grass prairies west of the Plan Area. It is unlikely to occur in the Plan Area and would therefore not be subject to project impacts.
8. Riparian brush rabbit Sylvilagus bachmani riparius	E/E/-	+	+	+ (H, ID, AD)	+	Yes	Meets all four criteria. This species is restricted to riparian habitats that could potentially be affected by conveyance and restoration activities.
9. Big free–tailed bat Nyctinomops macrotis	-/SSC/-	+			+	No	In addition to being a state species of special concern, this species is designated as Moderate–High Priority by the Western Bat Working Group (WBWG). It is also designated as Least Concern on the IUCN Red List. This species has a very restricted distribution in the San Francisco Bay Area. Due to its status and restricted range, it is reasonable to assume that this species could become listed over the term of the BDCP.  The range of this species does not extend into or near the Plan Area and thus would not be affected by covered activities.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
10. Western mastiff bat Eumopsperotis californicus	-/SSC/-	+	+	_	+	No	In addition to being a state species of special concern, this species is also included on the IUCN Red List as Least Concern and is designated as High Priority by WBWG. It is reasonable to conclude that this species could be listed over the term of the BDCP. It is not being considered for coverage under any other overlapping HCP/NCCPs.  This colonial species uses caves and rock outcrops for roosting. Thus, while the species could potentially occur in the Plan Area for foraging, because the area lacks suitable roosting habitat, there is no potential to adversely affect this species.
11. Pallid bat Antrozous pallidus	-/SSC/-		+	+ (ID/AD)	+	No	In addition to being a state species of special concern, this species is also included on the IUCN Red List as Least Concern and is designated as High Priority by WBWG. While declines of this species have been reported, the pallid bat is widespread throughout California. There are insufficient data to indicate that listing of this species would be warranted over the term of the BDCP.  This widely distributed species roosts in small colonies in caves, rock crevices, and tree hollows, but will also use bridges and buildings. Potential to adversely affect is based on the potential for removal of occupied trees, buildings, and bridges.
12. Yuma Myotis bat Myotis yumanensis	-/SA/-		+	+ (ID/AD)	+	No	This species is considered a Special Animal by DFG because it is included on the IUCN Red List, for which it is designated as Least Concern, and on the WBWG list, for which it is designated as Low–Medium Priority. It has no legal or other conservation status. There is no indication that it would be listed over the term of the BDCPover the term of the BDCP. This

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							species is being considered as a covered species in the South Sacramento HCP.  It is widely distributed and so likely occurs in Plan Area, but the limited extent of riparian forests suggests that there are few areas where roosting or maternity colonies are possible. The species more likely occurs during feeding and during migration. Potential to adversely affect based on the limited potential for removing occupied trees.
13. Silver-haired bat Lasionycteris noctivagans	-/SA/-		+	+ (ID/AD)	+	No	This species is considered a Special Animal by DFG because it is included on the IUCN Red List, for which it is designated as Least Concern, and on the WBWG list, for which it is designated as Medium Priority. It has no legal or other conservation status. There is no indication that it would be listed over the term of the BDCP. It is not a covered species under any of the overlapping permitted or in–process HCPs/NCCPs. Typically a higher elevation forest–dwelling species, it can occur in mature riparian forests in the Central Valley; however, the limited extent of riparian forests in the Plan Area may be insufficient to support this species, at least in abundance. The species more likely occurs during feeding and during migration. Potential to adversely affect is based on the unlikely possibility of removing active roosting or maternity sites in riparian habitat.
14. Western red bat Lasiurus blossevillii	-/SSC/-		+	+ (ID/AD)	+	No	In addition to being a state species of special concern, this species is also designated as High Priority by WBWG. It is reasonable to conclude that this species could become listed over the term of the BDCP. It is also being considered as a covered species in the South Sacramento HCP and the Yolo HCP/NCCP.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							This species roosts in trees and is usually solitary. In the Plan Area, potentially occupied habitat includes mature riparian – usually cottonwood/sycamore riparian woodland. Potential to affect based on the potential for removal of active roost trees. While declines of this species have been reported, the red bat is widespread throughout California. There are insufficient data to indicate that listing of this species would be warranted over the term of the BDCP.
15. Hoary bat Lasiurus cinereus	-/SA/-		+	+ (ID/AD)	+	No	This species is considered a Special Animal by DFG because it is included on the IUCN Red List, for which it is designated as Least Concern, and on the WBWG list, for which it is designated as Medium Priority. It has no legal or other conservation status. There is no indication that it would be listed over the term of the BDCP. It is not a covered species under any of the overlapping permitted or in–process HCPs/NCCPs. This is a solitary bat that does not nest or roost colonially. It ranges widely, but populations in the Central Valley are most likely non–reproductive or migratory. Roosts in large trees in mature riparian – usually cottonwood/sycamore, which is limited in study area. Potential to affect based on the potential for removal of active roost trees.
16. Townsend's big- eared bat Corynorhinus townsendii	-/SSC/-	+	+	+ (ID/AD)	+	Yes	Meets all four criteria. In addition to being a state species of special concern, this species is also included on the IUCN Red List as Vulnerable and is designated as High Priority by WBWG. It is reasonable to conclude that this species could be listed over the term of the BDCP. It is also included as a covered species in the East Contra Costa HCP/NCCP and is being considered for coverage under the Yolo HCP/NCCP.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							This is a highly colonial bat that typically occupies natural caves; however, it is also known to colonize old structures such as barns. It is widely distributed throughout most of California and while there are no known roosts or maternity sites from the Plan Area, there is potential for use of old barns and other structures.
17. Suisun shrew Sorex ornatus sinuosus	-/SSC/-	+	+	+ (H)	+	Yes	Meets all four criteria. This species is also being considered as a covered species in the Solano HCP/NCCP.
							This species is closely associated with tidal marsh habitats and could potentially be listed in the future. It occurs in the western extreme of the Plan Area where restoration activities could affect occupied habitats.
Birds							
1. Yellow–headed blackbird Xanthocephalus xanthocephalus	-/SSC/-		+	+ (H, AD)	+	No	Priority 3 as a state species of special concern with relatively stable populations since 1980. Not covered or considered for coverage on other overlapping HCP/NCCPs.  Potentially affected from removal of occupied breeding habitat associated with conveyance and restoration activities, but not sufficient to adversely affect the species.
2. Tricolored blackbird Agelaius tricolor	BCC/SSC/	+	+	+ (H, AD, ID)	+	Yes	Meets all four criteria. Significant and dramatic population declines and covered or considered for coverage under all overlapping HCP/NCCPs.  Potential adverse effects from removal or disturbance to occupied breeding sites associated with conveyance and restoration activities.

		S	Selection Criteria For Coverage <sup>B</sup>				
	Status <sup>A</sup>			Potential to			
	(Federal/		Occurrence	be		Consider	
Common Name	State/	Listing	in the Plan	Adversely	Sufficient	for	Carrette Carrette
Scientific Name	CNPS)	Potential	Area	Affected <sup>C</sup>	Information	Coverage?	
3. Grasshopper sparrow Ammodramus savannarum	-/SSC/-	_	+	+ (AD, ID, H)	+	No	While population declines are reported, the population trend data is unreliable and insufficient to indicate that a listing would be warranted over the term of the BDCP. Also being considered for coverage in the Yolo HCP/NCCP.  Breeding has been documented at Cosumnes River and Yolo Bypass. Potential adverse effects from
							conveyance construction and possibly from restoration activities in the Yolo Basin.
4. Bell's sage sparrow Amphispiza belli belli	BCC/SA/-	-	-	-	+	No	This species is a former state species of special concern and currently remains on the DFG Watch List. It is also designated as Least Concern on the IUCN Red List. There is no indication that this species would become listed over the term of the BDCP. This species occurs in chaparral habitats and is not known to occur in the Plan Area. Therefore, covered activities are not expected to adversely affect this species.
5. Song sparrow "Modesto" <i>Melospiza melodia</i>	-/SSC/-		+	+ (H)	+	No	Because it is a Priority 3 state species of special concern, it is not covered by any other overlapping HCP/NCCPs, and because there is ongoing debate regarding whether this population is a valid subspecies, there is no indication that it would become listed over the term of the BDCP. In addition, while it could be affected—particularly associated with restoration actions—this species may benefit from restoration activities in the long term.
6. Suisun song sparrow Melospiza melodia maxillaris	BCC/SSC/	+	+	+	+	Yes	Meets all four criteria. This species is also being considered as a covered species in the Solano HCP/NCCP.  This species is closely associated with tidal marsh habitats and has a restricted distribution within the

Evaluation of Species Considered for Coverage

Appendix 1.A

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  Delta and Suisun Marsh. It could potentially be listed over the term of the BDCP. It occurs in the western extreme of the Plan Area and Suisun Marsh where restoration activities could affect occupied habitats.
7. Samuels (San Pablo) song sparrow Melospiza melodia samuelis	BCC/SSC/	+	-	-	+	No	This species' range does not extend into the Plan Area and thus would not be affected by project actions.
8. California yellow warbler Dendroica petechia	-/SCC/-	+	+	-	+	No	Populations of this species continue to trend downward. It is a covered species in the San Joaquin County HCP. It is reasonable to suggest that this species would become listed over the term of the BDCP.  The species does not nest within the Plan Area, but can be observed during migration. There is also limited potential for nesting, particularly on portions of the Cosumnes River Preserve, but these areas are not expected to be affected by covered activities.
9. Yellow-breasted chat <i>Icteria viriens</i>	-/SSC/-	+		+ (H, AD, ID)	+	Yes	Meets all four criteria. Negative population trend since 1980. Also covered under the San Joaquin HCP and considered for coverage under the Solano and Yolo HCP/NCCPs and the South Sacramento County HCP. It is reasonable to suggest that this species would become listed over the term of the BDCP. This species occurs in riparian habitat and could be affected by conveyance and possibly restoration activities.
10. Salt Marsh Common Yellowthroat Geothlypis trichas sinuosa	BCC/SSC/ -	+	-	-	+	No	This species' range does not extend into the Plan Area and thus would not be affected by project actions.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
11. Purple martin Progne subis	-/SSC/-	+	+	-	+	No	This species is considered extirpated from the Plan Area, but birds that nest in the Sacramento urban area may occasionally occur in the Plan Area. Due to substantial population declines since the 1960s, it is reasonable to suggest that this species could become listed over the term of the BDCP. It is being considered for coverage under the Yolo HCP/NCCP. Because the species does not nest within the Plan Area with the exception of the Sacramento urban area, and is absent from the Central Valley; and because major riparian corridors would be avoided through tunneling, covered activities are not expected to adversely affect this species.
12. Bank swallow Riparia riparia	-/T/-	+	+		+	No	Possibility for nesting colonies along the Sacramento River near Fremont Weir. This species is covered in the San Joaquin and Natomas Basin HCPs, and is considered for coverage in the Yolo HCP/NCCP. However, BDCP activities are not expected to disturb potential habitat.
13. California horned lark Eremophila alpestris actia	-/SA/-		+	-	+	No	This species is on the DFG Watch List and is designated as Least Concern on the IUCN Red List. It is not covered under any overlapping HCP/NCCPs. There is no indication that it would become listed over the term of the BDCP.  This is a relatively common species and is considered an agricultural pest.
14. Least Bell's vireo Vireo bellii pusillus	SE/FE/-	+	+	+	+	Yes	Meets all four criteria. Two individual male least Bell's vireo spent the spring and summer of 2010 within the Plan Area in the Yolo Bypass Wildlife Area singing and attempting to attract mates. This increases the likelihood of individuals returning to the Plan Area in subsequent years and perhaps

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  establishing a breeding pair over the term of the BDCP. The potential for the project to affect this species also increases with these new occurrences.
15. Loggerhead shrike Lanius ludovicianus	BCC/SSC/	-	+	+ (H, AD, ID)	+	No	While somewhat stabilized recently, significant negative population trend since 1968. Also a covered species under the San Joaquin HCP and Natomas Basin HCP and considered for coverage in the South Sacramento County HCP and Yolo County HCP/NCCP. This species potentially occurs throughout the Plan Area and could be affected by conveyance and possibly restoration activities. However, it is unlikely that the species would become listed during the time period that covered activities that could affect the species would be implemented.
16. Lewis's woodpecker Melanerpes lewisi	BCC/SA/-	-	+	+	+	No	This species is designated as Least Priority on the IUCN Red List. There is no indication that it would become listed over the term of the BDCP.
17. Western burrowing owl Athene cunicularia hypugaea	BCC/SSC/	+	+	+ (AD, ID, H)	+	Yes	Meets all four criteria. This species is a covered species under all overlapping HCP/NCCPs.  Burrowing owls could potentially be affected from removal of grassland and pastureland habitats associated with conveyance activities, and possibly restoration activities in the Yolo Basin.
18. Long–eared owl Asio otus	-/SSC/-		+	+ (H, AD, ID)	+	No	This species has been a state species of special concern since 1978. Its range includes all of California with the exception of much of the Central Valley. There is little recent reliable data on the abundance of this species and insufficient data to indicate that a listing is warranted over the term of the BDCP.  Although there are no recently reported occurrences of this species from the plan area, long–eared owl

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name	Status <sup>A</sup> (Federal/ State/	Listing	Occurrence in the Plan	Potential to be Adversely	Sufficient	Consider for	
Scientific Name	CNPS)	Potential	Area	Affected <sup>c</sup>	Information	Coverage?	
							could potentially be affected from removal of riparian woodland and grassland/seasonal wetland habitats associated with conveyance and restoration activities.
19. Short-eared owl Asio flammeus	-/SSC/-	-	+	+ (H, AD)	+	No	This species has been a state species of special concern since 1978. While local population declines have been reported, there is insufficient data on statewide populations to indicate that a listing would be warranted over the term of the BDCP.
20. Western yellow- billed cuckoo Coccyzus americanus occidentalis	C,BCC /E/-	+	+		+	Yes	Though it does not meet all four criteria, due to this species' rarity and dependence on limited specialized habitat that is found in the Plan Area, it is proposed for coverage under the BDCP. This species has been observed within the Plan Area during migration in riparian patches too small to support breeding habitat, but that can still serve as migratory corridors. Potential breeding habitat for cuckoos in the Plan Area is restricted to the Cosumnes River Preserve, which would not be affected by covered activities. Riparian restoration actions under the BDCP could allow the re–establishment of sufficiently large areas of riparian habitat that will permit the re–colonization of the Plan Area by breeding cuckoos.
21. California gull  Larus californicus	-/SA/-		+	+ (H)	+	No	This species is a former state species of special concern and remains on the DFG Watch List. It is also designated as a Least Concern species on the IUCN Red List. No other overlapping HCP/NCCPs include this species as a covered species. There is no indication that this species would become listed over the term of the BDCP.  There are no California gull breeding colonies within

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  the Plan Area with the possible exception of small colonies in the far western end of the Plan Area that could be affected by restoration activities.
22. Black tern Chlidonias niger	-/SSC/-	-	+	+ (H)	+	No	This species was recently designated a state species of special concern and is a proposed covered species under the yolo County HCP/NCCP. While local population declines have been reported, particularly from the Central Valley, there is no indication that listing of this species would be warranted over the term of the BDCP.  This species has been documented in the Yolo Basin, where it is associated with rice fields. The effects of covered activities on this species are expected to be minimal.
23. California least tern Sterna antillarum browni	E/E,FP/-	+	+	+ (H)	+	Yes	Meets all four criteria. This species occurs in discrete locations within the Plan Area in small breeding colonies. Habitat restoration actions could attract or affect nesting terns.
24. Long-billed curlew Numenius americanus	BCC/SA/-			+ (H, AD)	+	No	This species is a former state species of special concern and remains on the DFG Watch List. It is also a federal bird of conservation concern. There is no indication that this species would become listed over the term of the BDCP.  Curlews only winter in the Plan Area and thus effects would be limited to temporary displacement from winter foraging habitats and possibly loss of winter foraging habitats from conveyance construction and restoration activities.
25. Snowy plover (interior population) <i>Charadrius alexandrinus</i>	BCC/SSC/	+	+	_	+	No	The range of the inland population of the snowy plover includes a small portion of the Plan Area in the Yolo Basin. This population is a state species of special concern and a federal bird of conservation

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							concern. It is reasonable to suggest that this population (along with the coastal population that is currently federally listed) could become listed over the term of the BDCP.  There are few breeding records of this species from the Yolo Bypass Wildlife Area, but none from anywhere else in the Plan Area. Potential effects would be limited to restoration activities planned for the Yolo Basin. It is assumed that this site would be protected from impacts resulting from restoration activities, and that the project would be unlikely to adversely affect this species.
26. Snowy plover (coastal population) Charadrius alexandrinus	T/-/-	+	-		+	No	The coastal population of snowy plover is federally listed but has no state status. This population occurs primarily along the coast and none of the recovery units, which generally define the range of the species, occur within the Plan Area. Thus, this population does not occur in the Plan Area and would not be affected by covered activities.
27. Mountain plover Charadrius montanus	BCC/SSC/		+	+ (H, AD)	+	No	In addition to being a state species of special concern and federal bird of conservation concern, the mountain plover is also designated as Vulnerable on the IUCN Red List. The species is being considered as a covered species on the Solano County and Yolo County HCP/NCCPs. There is no indication that the species would become federally listed over the term of the BDCP, and since the species only winters in California, it is unlikely that the species would become state listed.  Mountain plovers do not breed in California, but the species has been reported during winter at several sites in Yolo and Solano Counties, including occasional occurrences in the Yolo Basin. However,

Evaluation of Species Considered for Coverage

Appendix 1.A

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	
							given that the species only winters in a small portion of the Plan Area, potential impacts are limited to temporary displacement during winter foraging, and thus covered activities are not expected to affect this species.
28. Lesser sandhill crane Grus canadensis canadensis	-/SSC/-	-	+	+ (H, AD, ID)	+	No	This species was recently designated a state species of special concern. While there is concern that agricultural conversions could continue to reduce habitat for this species, the range size and population trend have remained fairly stable and there is no indication that the species would become listed over the term of the BDCP.  This species does not nest in the Plan Area, but the Plan Area encompasses the majority of the traditional winter range of this species in the Delta. It occurs in seasonal wetland and agricultural habitats where it roosts and forages. Potential effects include displacement of foraging habitats from conveyance and restoration activities.
29. Greater sandhill crane Grus canadensis tabida	-/T,FP/-	+	+	+ (H, AD, ID)	+	Yes	Meets all four criteria. This species is also a covered species in the Natomas and San Joaquin HCPs and is being considered for coverage in the South Sacramento HCP.  This species does not nest in the Plan Area, but the Plan Area encompasses the majority of the traditional winter range of this species in the Delta. It occurs in seasonal wetland and agricultural habitats where it roosts and forages. Potential effects include displacement and possible removal of roosting and foraging habitats from conveyance and restoration activities.

		Selection Criteria For Coverage <sup>B</sup>					
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
30. California black rail Laterallus jamaicensis coturniculus	BCC /T,FP/-	+	+	+ (H, ID, AD)	+	Yes	Meets all four criteria. This species is also being considered as a covered species in the Solano HCP/NCCP, and is a covered species in the San Joaquin County HCP.  This species is closely associated with tidal marsh habitats. It occurs throughout the Western and Central Delta and could be affected by conveyance and restoration activities.
31. California clapper rail Rallus longirostris obsoletus	E/E,FP/-	+	+	+ (H)	+	Yes	Meets all four criteria. This species is also being considered as a covered species in the Solano HCP/NCCP.  This species is closely associated with tidal marsh habitats. It occurs in the western extreme of the Plan Area where restoration activities could affect occupied habitats.
32. Merlin Falco columbarius	-/SA/-		+		+	No	The merlin is a former state species of special concern and currently remains on the DFG Watch List. It is also designated as Least Concern on the IUCN Red List. It is being considered for coverage in the South Sacramento HCP; however, the species has no state or federal status and there is no indication that the species would become listed over the term of the BDCP.  The merlin does not nest in California. It is observed occasionally during winter in the Plan Area. Potential affects would be limited to temporary displacement from foraging habitat during project construction. It is therefore not expected to be adversely affected by the project.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
33. American Peregrine Falcon Falco peregrinus anatum	BCC/E,FP /-	+	+	-	+	No	The peregrine falcon was recently delisted by the USFWS. It remains state endangered and fully protected; and is a federal bird of conservation concern. It is a covered species in the Natomas Basin HCP, and is being considered for coverage in the Yolo HCP/NCCP and South Sacramento County HCP. This species does not nest within or near the Plan Area. It is occasionally observed foraging in the Plan Area during the winter. Potential affects are limited to temporary displacement of foraging individuals during winter. Thus, the project is not expected to adversely affect this species.
34. Prairie falcon Falco mexicanus	BCC/SA/-		+		+	No	The prairie falcon is a former state species of special concern and currently remains on the DFG Watch List. It is also a federal Bird of Conservation Concern and is designated Least Concern on the IUCN Red List. It is a covered species in the San Joaquin HCP probably a result of its previous status as a species of special concern.  The prairie falcon does not nest in the Plan Area. It is, however, occasionally observed foraging in the Plan Area, mostly during the winter. Potential affects are limited to possible temporary displacement from foraging areas during covered activities. It is therefore not expected to be adversely affected by the project.
35. Bald eagle Haliaeetus leucocephalus	-/E,FP/-	+	+	-	+	No	The bald eagle was recently delisted by the USFWS and currently has no federal status. It remains a state endangered species and state fully protected species. The species is being considered for coverage under the South Sacramento County HCP. However, there are several traditional use areas in the south

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							Sacramento County Plan Area (primarily the upper American River) and an important winter use area and one nest location in the Yolo County Plan Area. This species does not nest in the Plan Area. It is occasionally observed foraging in the Plan Area during the winter, but there are no traditionally used bald eagle roosts or winter foraging habitats in the Plan Area, with the possible exception of a portion of the Cosumnes River Preserve that would not be affected by project actions. Thus, covered activities are not expected to adversely affect this species.
36. Northern harrier Circus cyaneus	-/SSC/-	_	+	+ (H, ID, AD)		No	This is a covered species under the San Joaquin HCP and is being considered for coverage under the Yolo HCP/NCCP, Solano HCP/NCCP, and South Sacramento HCP. This species occurs throughout the Plan Area and could be affected by conveyance and restoration activities. While declines of this species have been documented, it remains widespread throughout California and is unlikely to become listed over the term of the BDCP.
37. Sharp-shinned Hawk Accipiter striatus	-/SA/-		+	_	+	No	This species was formerly a state species of concern, but was removed from that list and is currently on DFG's Watch List. It is also designated as a Least Concern species on the IUCN Red List. It is a covered species in the San Joaquin County HCP. It is also currently considered for coverage under the South Sacramento HCP and the Solano HCP/NCCP. While it may be a covered species in other HCP/NCCPs that overlap the Plan Area, there is no indication that this species would become listed over the term of the BDCP.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  This species only winters in the Plan Area and so would not be affected by covered activities.
38. Cooper's Hawk Accipiter cooperi	-/SA/-	-	+	+ (ID, AD)	+	No	This species was formerly a state species of special concern, but was removed from that list and is currently on DFG's Watch List. It is also designated as a Least Concern species on the IUCN Red List. It is a covered species in the San Joaquin County HCP. It is also currently considered for coverage under the South Sacramento HCP and the Solano HCP/NCCP. While it may be a covered species in other HCP/NCCPs that overlap the Plan Area, there is no indication that this species would become listed over the term of the BDCP.  This species occurs in riparian and other woodland habitats and could be affected by conveyance or restoration activities.
39. White-tailed kite Elanus leucurus	-/FP/-	+	*	+ (H, ID, AD)	+	Yes	Meets all four criteria. The white-tailed kite is a state Fully Protected species. It is also being considered for coverage under the South Sacramento County HCP and the Yolo HCP/NCCP.  The kite occurs in riparian and other woodland habitats and could be affected through conveyance or restoration activities that remove trees or disturb active nests.
40. Swainson's hawk Buteo swainsoni	BCC /T/-	+	+	+ (H, ID, AD)	+	Yes	Meets all four criteria. Swainson's hawk is a covered species or is being considered for coverage in all overlapping HCPs/NCCPs.  Swainson's hawks nest in riparian woodlands, roadside trees, tree rows, isolated trees, woodlots, and trees in farmyards and rural residences. They forage in grasslands and agricultural fields. Nest sites and foraging habitat would be affected by

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  conveyance facilities and possibly by restoration activities.
41. Ferruginous hawk Buteo regalis	BCC/SA/-	-	+	-	+	No	The ferruginous hawk is a former state species of special concern and remains on the DFG Watch List. It is also a federal bird species of conservation concern and is designated as Near Threatened on the IUCN Red List. The species does not breed in California and only winters in relatively small numbers in the Plan Area. There is no indication that the species would become listed over the term of the BDCP. It is being considered as a covered species in the South Sacramento HCP, but was initially considered due to its former status as a state species of special concern.  Because this species only winters in the Plan Area, it is not expected to be affected by covered activities.
42. Golden eagle Aquila chrysaetos	BCC/FP/-	+	+		+	No	The golden eagle is a state Fully Protected species. The species was formerly a state species of concern, but was removed from that list and is currently on DFG's Watch List. It is also designated as a Least Concern species on the IUCN Red List and is a federal Bird of Conservation Concern. The East Contra Costa HCP/NCCP and San Joaquin HCP both include the golden eagle as a covered species, and the Solano and Yolo HCP/NCCPs and the Sacramento HCP are considered the species for coverage. However, each of these plans includes Plan Areas that could support nesting golden eagles. Golden eagles do not currently and are not expected to nest within the Plan Area. While they may forage occasionally in the Plan Area, affects would be limited to temporary displacement of foraging birds. Thus, the species is not likely to be adversely affected

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments by covered activities.
43. Osprey Pandion haliaetus	-/SA/-	-	+	-	+	No	The osprey is a former state species of special concern and remains on the DFG Watch List. It is also included on the IUCN Red List, for which it is designated as Least Concern. While there are occasional wintering occurrences, the species is not known to nest in the Plan Area. The species is a covered species in the San Joaquin County HCP.  Ospreys would typically be found roosting in riparian areas or trees or artificial structures around water bodies. Because it is not expected to nest in the Plan Area, affects are limited to displacement of foraging birds. Thus, covered activities are not expected to adversely affect this species.
44. Cackling (Aleutian Canada) goose Branta hutchinsii leucopareia	-/SA/-		+	(H)	+	No	This species was delisted by the USFWS. It remains on the DFG Special Animal list but has no status designation. There is no indication that this species would become listed over the term of the BDCP. It is not covered in any other neighboring HCP/NCCP except San Joaquin HCP due to its previous listing. Winters in the Yolo Basin and various locations in the Delta and could potentially be affected by restoration activities.
45. Tule white-fronted goose (wintering) Anser albifrons elgasi	-/SSC/-		+	+ (H)	+	No	Although this is a species of special concern, it is also a species closely managed by DFG on its wintering grounds. There is no indication that this species would become listed over the term of the BDCP.  This species only winters in California where it relies on dense tule–cattail marsh habitat. It has been documented within the Plan Area west of Sherman Island and in various locations in the Suisun Marsh. It could potentially be affected by restoration

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  activities, but because the species occurs only during the winter, impacts can be avoided. Also, in the long term the species would benefit from these activities.
46. Redhead (nesting) Aythya americana	-/SSC/-	-	+	+ (H)	+	No	This species has declined throughout much of its range in California in recent years. Restricted primarily to state and federal refuges, restoration activities in these areas have failed to restore deep water habitats required by redhead. However, this species would likely respond to changes in refuge management and thus there is no indication that it would become listed over the term of the BDCP. It is not covered or being considered for coverage in other overlapping HCPs/NCCPs.  This species breeds in the Yolo Bypass. It could be affected by restoration activities occurring in the Yolo Bypass.
47. White–faced Ibis Plegadis chihi	-/SA/-		***	+ (H, ID, AD)	+	No	White-faced ibis rookeries are considered sensitive colonial breeding sites for this species and are thus included on the DFG Special Animals list. The species is also included on the DFG Watch List and on the IUCN Red List, where it is designated Least Concern. The San Joaquin County HCP and the Natomas Basin HCP include this species as a covered species; and the South Sacramento HCP is considering the species for coverage. However, this species was recently removed from the state bird species of special concern list due to significantly increased populations and there is no indication that this species would be listed over the term of the BDCP. It is therefore not recommended for coverage. White-faced ibis rookeries could occur in emergent marsh habitats and could be affected by conveyance

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments and restoration activities.
48. Snowy Egret Egretta thula	-/SA/-	-	+	+ (H, ID, AD)	+	No	Snowy egret rookeries are considered sensitive colonial breeding sites for this species and are thus included on the DFG Special Animals list. They are also included on the DFG Watch List and on the IUCN Red List, where it is designated as Least Concern. The San Joaquin County HCP includes this species as a covered species; however, there is no indication that this species would be listed over the term of the BDCP and so is not recommended for coverage.  Snowy egret rookeries could occur in riparian habitat or other woodland habitats or in emergent marsh habitats, and could be affected by conveyance and restoration activities.
49. Least bittern (nesting) Ixobrychus exilis	-/SSC/-		+	+ (H, ID, AD)	+	No	This species has been documented more regularly in recent years, and while possibly attributed to an increase in observer coverage, information on population trends are unreliable. While this species has declined as a result of loss of freshwater marsh habitats, there is no indication that a listing of this species would be warranted over the term of the BDCP.  This species occurs in fresh water marsh habitats in the Yolo Bypass, east of the Sacramento River, and in the western Delta. It could be affected by restoration and conveyance activities.
50. Great egret  Ardea albus (rookery)	-/SA/-	-	+	+ (H, ID, AD)	+	No	Great egret rookeries are considered sensitive colonial breeding sites for this species and are thus included on the DFG Special Animals list. It is also included on the IUCN Red List, where it is designated as Least Concern. The San Joaquin County HCP includes this species as a covered species; however,

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
						1	there is no indication that this species would be listed over the term of the BDCP and so is not recommended for coverage.  Rookeries could occur in riparian habitat or in other woodland habitats, including eucalyptus groves in the Plan Area, and could be affected by conveyance and restoration activities.
51. Black–crowned night heron Nycticorax	-/SA/-	-	+	+ (H, ID, AD)	+	No	Black-crown night heron rookeries are considered sensitive colonial breeding sites for this species and are thus included on the DFG Special Animals list. It is also included on the IUCN Red List, where it is designated as Least Concern. The San Joaquin County HCP includes this species as a covered species; however, there is no indication that this species would be listed over the term of the BDCP and so is not recommended for coverage.  Black-crowned night heron rookeries could occur in riparian habitat or other woodland habitats or in emergent marsh habitats, and could be affected by conveyance and restoration activities.
52. Great blue heron Ardea herodias (rookery)	-/SA/-		+	+ (H, ID, AD)	+	No	Great blue heron rookeries are considered sensitive colonial breeding sites for this species and are thus included on the DFG Special Animals list. It is also included on the IUCN Red List, where it is designated as Least Concern. The San Joaquin County HCP includes this species as a covered species; however, there is no indication that this species would be listed over the term of the BDCP and so is not recommended for coverage.  Rookeries could occur in riparian habitat or in other woodland habitats, including eucalyptus groves in the Plan Area, and could be affected by conveyance

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments and restoration activities.
53. Double-crested cormorant Phalacrocorax auritus	-/SA/-	-	+	+ (H, ID, AD)	+	No	Double–crested cormorant is a former state species of special concern; however, only rookeries were considered sensitive. It remains on DFG's Special Animals list as a Watch List species, which includes primarily delisted species or species that do not meet the criteria as a species of special concern. It is also is included on the IUCN Red List, where it is designated as Least Concern. The species has no legal or other conservation status. This is a covered species under the San Joaquin County HCP. There is no indication that this species is likely to be listed over the term of the BDCP.  This species potentially nests in small rookeries in riparian habitats or some artificial structures in the Plan Area and could be affected by conveyance and restoration activities.
54. Western grebe Aechmophorus occidentalis	-/-/-		+	+ (ID)	+	No	Western grebe has no legal or conservation status. The San Joaquin County HCP includes it as a covered species and it is on the IUCN Red List designated as a species of Least Concern. While there have been concerns regarding the status of breeding populations, there is no indication that the species would become listed over the term of the BDCP. There is one known breeding location in the Plan Area – within the Bouldin Island quadrangle, which could potentially be affected by the in–Delta conveyance activities; but otherwise it occurs mainly during the winter.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
Reptiles							
1. Giant garter snake Thamnophis gigas	T/T/-	+	+	+ (H, ID, AD)	+	Yes	Meets all four criteria. This species is covered under all overlapping HCP/NCCPs.  Potential affects could occur through disturbance of watercourses and adjacent upland habitats from conveyance and restoration activities.
2. Alameda whipsnake Masticophis lateralis euryxanthus	T/T/-	+	-	-	+	No	The East Contra Costa HCP/NCCP is the only overlapping plan to cover this species due to its distribution within the Contra Costa County.  This species' range does not extend into the Plan Area and thus covered activities are not expected to adversely affect this species.
3. San Joaquin whipsnake Masticophis flagellum ruddocki	-/SSC/-	-	+		+	No	The San Joaquin County HCP is the only overlapping plan to cover this species with occurrences from Corral Hollow inSan Joaquin County.  While the species may be found along the western edge of the Plan Area, it is unlikely to occur in the vicinity of conveyance or restoration activities and thus is not expected to be adversely affected by the project.
4. Silvery legless lizard Anniella pulchra pulchra	-/SSC/-	+	+	-	+	No	The East Contra Costa HCP/NCCP is the only overlapping plan to cover this species. That plan documented occurrences and potential habitat along the western edge of the Plan Area; however, none are in the vicinity of proposed conveyance or restoration activities.
5. Coast horned lizard Phrynosoma coronatum frontale	-/SSC/-		+	+ (AD)	+	No	This species is covered under the San Joaquin HCP. Documented occurrences in the grasslands on the western edge of the Plan Area in the vicinity of Clifton Court Forebay. Likelihood for impacts are low and the species is unlikely to become listed in the

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments foreseeable future.
6. Western pond turtle Actinemys marmorata	-/SSC/-	+	+	+ (H, ID, AD)	+	Yes	Meets all four criteria. In addition to being a state species of special concern, this species is also designated as Vulnerable on the IUCN Red List. It is covered or considered for coverage on all overlapping HCP/NCCPs. It is reasonable to suggest that this species could become listed over the term of the BDCP.  This species could potentially be affected by ground disturbances in watercourses and adjacent uplands associated with conveyance and possibly restoration activities.
Amphibians							
1. California red-legged frog Rana aurora draytonii	T/SSC/-	+	+	+ (AD)	+	Yes	Meets all four criteria. This species is covered under the East Contra Costa HCP/NCCP and the San Joaquin County HCP and is considered for coverage under the Yolo and Solano HCP/NCCPs.  There are reported occurrences of this species in grassland/pond habitats in the vicinity of Clifton Court Forebay. Potential affects could occur through disturbance of occupied ponds or streams.
2. Foothill yellow- legged Frog Rana boylii	-/SSC/-			_	+	No	This species is covered under the East Contra Costa HCP/NCCP and the San Joaquin County HCP and is considered for coverage under the Yolo and Solano HCP/NCCPs. Each of these Plan Areas include potential habitat for this species.  There are no occurrence records and no potential habitat for foothill yellow–legged frog in the Plan Area and thus covered activities are not expected to affect this species.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
3. Western spadefoot toad Spea hammondii	-/SSC/-	+	+	+ (H, AD)	+	Yes	Meets all four criteria. This species is covered under the San Joaquin HCP and is considered for coverage under the Yolo County HCP/NCCP and the South Sacramento County HCP.  Potential effects could occur through disturbance of vernal pools and intermittent streams and adjacent grassland habitats from conveyance and restoration activities.
4. California tiger salamander (Central Valley DPS) Ambystoma californiense	T/SSC/-	+	+	+ (H, AD)	+	Yes	Meets all four criteria. This species is covered or is being considered for coverage under all overlapping HCP/NCCPs.  Potential affects could occur through disturbance of vernal pools and ponds and adjacent grassland habitats from conveyance and restoration activities.  As of February 2009 this species is a candidate for state listing as endangered.
Invertebrates							
1. Blennosperma vernal pool andrenid bee Andrena blennospermatis	-/-/-	-	+	+ (AD)	+	No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP.
2. Redheaded sphecid wasp Eucerceris ruficeps	-/-/-		U	U	-	No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP.
3. Antioch multilid wasp Myrmosula pacifica	-/-/-		+	-	+	No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. It is known from Antioch Dunes and thus is not expected to be affected by covered activities.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
4. Antioch adrenid bee Perdita scitula antiochensis	-/-/-	-	+	-	+	No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. It is known from Antioch Dunes and thus is not expected to be affected by covered activities.
5. Antioch specid wasp Philanthus nasalis	-/-/-	-	+	-	+	No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. It is known from Antioch Dunes and thus is not expected to be affected by covered activities.
6. Antioch Dunes halcitid bee Sphecodogastra antiochensis	-/-/-	-	+		+	No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. It is known from Antioch Dunes and thus is not expected to be affected by covered activities.
7. Lange's metalmark butterfly Apodemia mormo langei	E/-/-	+	+		+	No	Species occurs in Plan Area but is not likely to be adversely affected. This species is known only from the Antioch Dunes within the Antioch Dunes Wildlife Refuge and is not expected to be affected by covered activities.
8. San Bruno elfin butterfly <i>Callophrys mossii</i> bayensis	E/-/-	+	_	-	+	No	This species' range does not extend into the Plan Area and thus it is not expected to be affected by covered activities.
9. Monarch butterfly Danaus plexippus	-/-/-	->	_	_	+	No	This species has no regulatory or conservation status. It is not a covered species in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. There are

Evaluation of Species Considered for Coverage

Appendix 1.A

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							no records of monarch roosts from within the Plan Area and thus covered activities are unlikely to affect this species.
10. Callippe Silverspot Butterfly Speyeria callippe callippe	E/-/-	+	-	-	+	No	Range does not appear to extend into the Plan Area and is thus not expected to be affected by covered activities.
11. Antioch efferian robberfly <i>Efferia antiochi</i>	-/-/-	-	+			No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCPs. There is no indication that it would become listed over the term of the BDCP. This species is known only from the Antioch area within the Plan Area and is not expected to be affected by covered activities.
12. Hurd's metapogon robberfly <i>Metapogon hurdi</i>	-/-/-	-	+			No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCPs. There is no indication that it would become listed over the term of the BDCP.  This species is known only from the Antioch area within the Plan Area and is not expected to be affected by covered activities.
13. Ciervo aegialian scarab beetle Aegialia concinna	-/SA/-		+	_	+	No	This species is designated as Vulnerable by the IUCN Red List. It has no regulatory or conservation status. It is a covered species under the San Joaquin County HCP. However, there is no indication that it would become listed over the term of the BDCP. It occurs in loose sands and sand dunes and is unlikely to be affected by covered activities.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
14. Antioch Dunes anthicid beetle Anthicus antiochensis	-/-/-	-	+	-	-	No	This species has no regularly or conservation status. It is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it could become listed over the term of the BDCP. It occurs in loose sands and sand dunes and is unlikely to be adversely affected by covered activities.
15. Sacramento anthicid beetle Anthicus sacramento	-/SA/-	-	+			No	This species is designated as Endangered on the IUCN Red List. It has no regularly or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it could become listed over the term of the BDCP. It occurs in loose sands and sand dunes and is unlikely to be adversely affected by covered activities.
16. Sacramento Valley tiger beetle Cicindela hirticollis abrupta	-/-/-		Ü	U	-	No	USFWS recently denied listing petition due to insufficient information. It has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. All known populations are extirpated and recent surveys suggest the species is extinct. There is no indication that this species would be listed over the term of the BDCP.
17. San Joaquin dune beetle Coelus gracilis	-/SA/-	-	+	+ (AD)	_	No	This species is designated as Vulnerable on the IUCN Red List. It has no regularly or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCP. There is no indication that it could become listed over the term of the BDCP. It occurs in loose sands and small sand dunes along the western edge of San Joaquin Valley and could potentially be affected by conveyance facilities.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
18. Valley elderberry longhorn beetle Desmocerus californicus dimorphus	T/-/-	+	+	+ (H, ID, AD)	+	Yes	Meets all four criteria. Potentially occupied shrubs could be affected by activities associated with conveyance and restoration activities.
19. Delta green ground beetle Elaphrus viridis	E/-/-	+	+	1	+	No	This species is being considered for coverage in the Solano County HCP/NCCP. Its restricted distribution may extend into the northwestern portion of the Plan Area. However, it does not occur in the vicinity of conveyance or restoration activities and thus is not expected to be affected by the project.
20. Ricksecker's water Beetle Hydrochara rickseckeri	-/-/-	-	+	+ (AD)	+	No	This species has no regulatory or conservation status and there is no indication that it would become listed over the term of the BDCP. However, it is being considered for coverage in the Solano HCP/NCCP and the South Sacramento County HCP.  This is a vernal pool–associated species and could be affected by activities associated with conveyance activities.
21. Curved–foot diving beetle Hygrotus curvipes	-/-/-		+	(AD)	+	No	This species has no regulatory or conservation status and there is no indication that it would become listed over the term of the BDCP. However, it is a covered species in the San Joaquin HCP.  This is a vernal pool/seasonal wetland-associated species and could be affected by activities associated with conveyance activities.
22. Moestan blister beetle <i>Lytta moesta</i>	-/-/-		-	-	+	No	This species has no regulatory or conservation status. It is not a covered species in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. Its known range does not extend into the Plan Area and thus covered activities would not affect this species.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
23. Molestan blister beetle <i>Lytta molesta</i>	-/-/-	-	+	+ (AD)	+	No	This species has no regulatory or conservation status and is not covered or considered for coverage in any overlapping HCP/NCCPs. There is no indication that it would become listed over the term of the BDCP. This is a vernal pool/seasonal wetland-associated species and could be affected by activities associated with conveyance activities.
24. San Francisco lacewing Nothochrysa californica	-/-/-	-	-	-		No	This species has no regulatory or conservation status. It is not a covered species in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. Its known range does not extend into the Plan Area and thus covered activities would not affect this species.
25. Wilbur Springs shorebug Saldula usingeri Polhemus	-/-/-	-			+	No	This species has no regulatory or conservation status. It is not a covered species in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. Its known range does not extend into the Plan Area and thus covered activities would not affect this species.
26. Middlekauff's shieldback katydid Idiostatus middlekauffi	-/SA/-		U	U	-	No	This species is designated as Critically Endangered by the IUCN Red List. It has no regulatory or conservation status. There is no indication that it would become listed over the term of the BDCP. It is not covered or considered for coverage in any overlapping HCP/NCCPs.
27. Hairy water flea Dumontia oregonensis	-/-/-		-	-	+	No	This species has no regulatory or conservation status. It is not a covered species in any overlapping HCP/NCCP. There is no indication that it would become listed over the term of the BDCP. Its known range does not extend into the Plan Area and thus covered activities would not affect this species.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
28. Vernal pool tadpole shrimp Lepidurus packardi	E/-/-	+	+	+ (H, AD)	+	Yes	Meets all four criteria. This species could be affected through disturbances to vernal pool and other seasonal wetland habitats associated with conveyance and restoration activities.
29. Conservancy fairy shrimp Branchinecta conservatio	E/-/-	+	+	+ (H, AD)	+	Yes	Meets all four criteria. This species could be affected through disturbances to vernal pool and other seasonal wetland habitats associated with conveyance and restoration activities.
30. Longhorn fairy shrimp Branchinecta longiantenna	E/-/-	+	+	+ (H, AD)	+	Yes	Meets all four criteria. This species could be affected through disturbances to vernal pool and other seasonal wetland habitats associated with conveyance and restoration activities.
31. Vernal pool fairy shrimp Branchinecta lynchi	T/-/-	+	+	+ (H, AD)	+	Yes	Meets all four criteria. This species could be affected through disturbances to vernal pool and other seasonal wetland habitats associated with conveyance and restoration activities.
32. Mid Valley Fairy Shrimp Branchinecta mesovalleyensis	-/-/-	+		+ (H, AD)	+	Yes	Meets all four criteria. This species is thought to have a very restricted range. A 2001 petition for listing was rejected by the USFWS in 2004 on the basis of insufficient data. However, it is reasonable to assume that this species could become listed over the term of the BDCP. This species is covered in all overlapping HCP/NCCPs.  This species could be affected through disturbances to vernal pool and other seasonal wetland habitats associated with conveyance and restoration activities.
33. California linderiella Linderiella occidentalis	-/SA/-	+	+	+ (H, AD)	+	Yes	Meets all four criteria. USFWS indicated likelihood of this species becoming listed within the term of the permit. This species is designated as Near Threatened on the IUCN Red List. It has no regulatory or conservation status. It is relatively common

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments throughout its range, but occurs in association with
							listed vernal pool species that could be affected by covered activities.
34. Bridges' coast range shoulderband Helminthoglypta nickliniana bridgesi	-/SA/-	-	-	-		No	This species is designated as Data Deficient on the IUCN Red List. It has no regulatory or conservation status. It is not covered under other overlapping HCP/NCCPs.  This species' range does not extend into the Plan Area and thus covered activities are not expected to affect this species.
Plants							
1. Santa Clara thorn- mint Acanthomintha lanceolata	-/-/4	-	_		+	No	This species is widely distributed on hillsides in the inner Coast Range southwest of the Delta and does not occur within the Plan Area.
2. Purdy's onion Allium fimbriatum var. purdyi	-/-/4	_	-		+	No	This variety is widely distributed in the inner Coast Range north of the Delta and does not occur within the Plan Area.
3. Large–flowered fiddleneck Amsinckia grandiflora	E/E/1B	+	-		+	No	This species is found in a very few occurrences that are all located in the inner Coast Range southwest of the Delta and does not occur present within the Plan Area.
4. Bent flowered fiddleneck Amsinckia lunaris	-/-/1B	-		-	+	No	This species is widely distributed in the inner and outer Coast Ranges from Colusa and Lake Counties in the north to Santa Cruz County in the south and does not occur within the Plan Area.
5. California androsace Androsace elongata ssp. acuta	-/-/4		-	_	+	No	This subspecies is widely distributed in the inner and outer Coast Ranges from Tehama County in the north and southward to the Peninsular Range in San Diego County and does not occur within the Plan Area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
6. Slender silver moss Anomobryum julaceum	-/-/2	-	-	-	+	No	This species is widely distributed in forests of the inner and outer Coast Ranges and Sierra Nevada on road cuts and rocks and in seeps and streams and does not occur within the Plan Area.
7. Twig-like snapdragon Antirrhinum virga	-/-/4	-	-	_	+	No	This species is widely distributed in the inner Coast Range in Lake, Mendocino, and Sonoma Counties and does not occur within the Plan Area.
8. Coast rock cress Arabis blepharophylla	-/-/4	-	-	-	+	No	This species is widely distributed in the inner Coast Range from Marin County south to Monterrey County and does not occur within the Plan Area.
9. Modest rock cress Arabis modesta	-/-/4	-	_	_	+	No	This species is widely distributed in the Klamath Range and in the Blue Ridge of Napa and Solano Counties and does not occur within the Plan Area.
10. Mt. Diablo manzanita Arctostaphylos auriculata	-/-/1B	-	+		+	No	This species is distributed in chaparral on the hillsides of Mt. Diablo and does not occur within the Plan Area.
11. Contra Costa manzanita Arctostaphylos manzanita ssp. laevigata	-/-/1B	-			+	No	This subspecies is distributed in chaparral on the hillsides of Mt. Diablo and does not occur within the Plan Area.
12. Serpentine milkweed Asclepias solanoana	-/-/4	-		-	+	No	This species is found at high elevations elevation in the inner Coast Range from Tehama County south to Solano County and does not occur within the Plan Area.
13. Carlotta Hall's lace fern Aspidotis carlotta- halliae	-/-/4		_	_	+	No	This species is broadly distributed in the inner and outer Coast Ranges from Marin County south to San Luis Obispo County and does not occur within the Plan Area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
14. Brewer's milk-vetch Astragalus breweri	-/-/4	-	-	_	+	No	This species is broadly distributed in the outer Coast Range from Mendocino County south to Marin County and does not occur within the Plan Area.
15. Cleveland's milkvetch  Astragalus clevelandii	-/-/4	-	-	-	+	No	This species is broadly distributed along streams, springs, and seeps in the inner Coast Range from Tehama County south to Napa County and does not occur within the Plan Area.
16. Ocean bluff milkvetch  Astragalus nuttallii var.  nuttallii	-/-/4	-	-	-	†	No	This variety is broadly distributed along the coast from Marin County to Santa Barbara County and does not occur within the Plan Area.
17. Jepson's milk-vetch Astragalus rattanii var. jepsonianus	-/-/1B	-	-		+	No	This variety is broadly distributed on serpentine soils in the inner Coast Range from Tehama County to Yolo County and does not occur within the Plan Area.
18. Ferris' milk-vetch Astragalus tener var. ferrisiae	-/-/1B	+	+		+	No	While this variety is present within the Plan Area in large playa pools at the Jepson Prairie Preserve and CDFG Tule Ranch Preserves, those areas will not be impacted.
19. Alkali milk-vetch Astragalus tener var. tener	-/-/1B	+	+	+ (H, AD)	+	Yes	Meets all four criteria. Alkali milk-vetch is almost always found on alkaline or saline soils occurring in vernally wet playas, flats, fallowed rice fields, and vernal swales in valley/foothill grasslands below 500 ft (Solano HCP, 2007; San Joaquin HCP 2000). It is covered in the Solano and San Joaquin HCPs and proposed for coverage in the Yolo County HCP. Locally, it is found in the Jepson Prairie Area, the CDFG Tule Ranch Preserve, and the Montezuma Wetlands in vernally flooded swales and flood plains of playa pools.  There is a single historical occurrence near Stockton but that location has been completely developed.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to	Sufficient Information	Consider for Coverage?	Coverage Comments
							There are other historical collections within impacts areas at the lower margins of uplands in the Cache Slough and Suisun Marsh areas but that habitat has been lost through intensive agriculture. There is the potential for the listing of this species within the plan period due to development impacts in the south San Francisco Bay area and agricultural impacts in the Central Valley.
20. Heartscale Atriplex cordulata	-/-/1B	+	+	+ (H, AD)	+	Yes	Meets all four criteria. Heartscale grows in sandy, saline or alkaline flats and scalds, in chenopod scrub, meadows, and valley/foothill grassland (Solano HCP 2007; San Joaquin HCP 2000). It is covered in the Solano and San Joaquin HCPs and the ISA Report recommends that this species be retained for consideration of coverage. It occurs within the Plan Area and potentially at the lower margins of uplands in the Cache Slough area and possibly in the Clifton Court Forebay area that could be affected by covered activities.  While heartscale is a widespread species, it may be declining due to loss of habitat through current and future development which may lead to listing during the plan period.
21. Crownscale Atriplex coronata var. coronata	-/-/4		+	-	+	No	This variety is widely distributed in the northern Sacramento Valley and central and southern San Joaquin Valley and is present at scattered alkaline soil areas in the inner Coast Range from Alameda County southward . Subspecies var vallicola was found in the Clifton Court Forebay area by DHCCP survey teams in 2009 and 2010.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
22. Lost Hills Crownscale Atriplex coronata var. vallicola	-/-/1B	-	+	?	+	No	Lost Hills Crownscale is widely distributed in the San Joaquin Valley (alkaline clay soils on the valley bottom and gypsum clay soils on the hills of the Coast Range) and on alkaline clay soils of the Carrizo Plain. It was discovered on BDCP surveys in the vicinity of the Clifton Court Forebay. It is not covered by any HCPs.
23. Brittlescale Atriplex depressa	-/-/1B	+	+	+ (H, AD)	+	Yes	Meets all four criteria. Brittlescale grows on alkaline or clay soils occurring in grasslands contained by valleys or foothills, meadows saltbrush, vernal pools, and at the edge of playas (San Joaquin HCP 2000; Solano HCP 2007; ECCC HCP, 2007). It is covered in the Solano and San Joaquin HCPs and the ISA Report recommends that this species be retained for consideration of coverage. It occurs within the Plan Area and potentially at the lower margins of uplands in the Cache Slough area and possibly in the Clifton Court Forebay area that could be affected by covered activities.  While brittlescale is a widespread species it may be declining due to loss of habitat through current and future development which may lead to listing during the plan period.
24. San Joaquin spearscale Atriplex joaquiniana	-/-/1B	+	+	+ (H, AD)	+	Yes	Meets all four criteria. San Joaquin spearscale grows on alkaline clay soils in alkali grasslands and meadows or on the margins of alkali scrub, (ECCC HCP 2007) and is also found in seasonal alkali wetlands and sinks in chenopod scrub, meadows, playas, and valley/grassland foothills (Solano HCP 2007). It is covered in the Solano and East Contra Costa County HCPs and proposed for coverage in the Yolo County HCP. The ISA Report recommends that this species be retained for consideration of

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							coverage. It occurs within the Plan Area and potentially at the lower margins of uplands in the Cache Slough area that could be affected by covered activities.  While San Joaquin spearscale is a widespread species it may be declining due to loss of habitat through current and future development which may lead to listing during the plan period.
25. Lesser saltscale Atriplex minuscula	-/-/1B	+	-	-		No	Lesser saltscale grows on alkaline or clay soils occurring in grasslands contained by valleys or foothills, meadows saltbrush, vernal pools, and at the edge of playas. Although there are no documented occurrences in the Plan Area, lesser saltscale is assumed to be within the Plan Area because of several herbarium specimens. These specimens have been reannotated as A. depressa from A. minuscula. Consequently, it is no longer considered as being present in the Plan Area.
26. Vernal pool smallscale Atriplex persistens	-/-/1B	+			+	No	This species has been reported from alkaline playas on the Jepson Prairie Preserve immediately outside of the Plan Area but those playas will not be affected by restoration activities.
27. Big-scale balsamroot Balsamorhiza macrolepis var. macrolepis	-/-/1B		-	-	+	No	This variety is widely distributed on hill slope soils derived from serpentinite or basalt in the inner Coast Range from Tehama County south to Kern County and is sporadically distributed on sandy soils along the lower margin of the Sierra foothills but does not occur within the Plan Area.
28. Big tarplant Blepharizonia plumosa	-/-/1B		+	_	+	No	This species is broadly distributed on hillsides on sites with shrink/swell clay soils, does not appear to be declining, and is not likely to be listed within the period of this plan. Additionally, there are no

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to	Sufficient Information	Consider for Coverage?	Coverage Comments documented collections within impacts areas with
							the exception of a single occurrence near Tracy from along railroad tracks west of town.
29. Brewer's calandrinia Calandrinia breweri	-/-/4	-	-	-	+	No	This species is widely distributed in the Peninsular Range from San Diego County northward and on serpentine soils in the Coast Range north and south of the San Francisco Bay area but does not occur within the Plan Area.
30. Round–leafed filaree California macrophyllum	-/-/2	-	+	-	+	No	This species is broadly distributed throughout California on sites with shrink/swell clay soils, does not appear to be declining, and not likely to be listed within the period of this plan. Additionally, there are no documented occurrences within impacts areas.
31. Mt. Diablo fairy- lantern Calochortus pulchellus	-/-/1B	-	-		+	No	This species is widely distributed in the Peninsular Range from San Diego County northward and on serpentine soils in the Coast Range north and south of the San Francisco Bay area but does not occur within the Plan Area.
32. Oakland star-tulip Calochortus umbellatus	-/-/4	-	-		+	No	This species is broadly distributed on Mount Diablo and on adjacent hills but does not occur within the Plan Area.
33. Butte County morning–glory Calystegia atriplicifolia ssp. Buttensis	-/-/1B		-	-	+	No	This subspecies is widely distributed in Butte, Del Norte, and Tehama Counties in foothill coniferous forests but does not occur within the Plan Area.
34. Chaparral harebell Campanula exigua	-/-/1B		-	_	+	No	This species is broadly distributed on scree and talus slopes in the inner Coast Range from San Benito County northwards to Contra Costa County but does not occur within the Plan Area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
35. Bristly sedge Carex comosa	-/-/2	-	+	+ (H, AD, ID, O)	+	No	This species is broadly distributed throughout North America but spotty in California (its seed is eaten and likely dispersed by waterfowl). It does not appear to be declining and is not likely to be listed within the period of this plan.
36. Fox sedge Carex vulpinoidea	-/-/2	-	+	+ (H, AD, ID, O)	+	No	This species is broadly distributed throughout North America but spotty in California (its seed is eaten and likely dispersed by waterfowl). The Flora of North America indicates that it is weedy along ditches, etc.
37. Succulent owl's clover Castilleja campestris ssp. succulenta	T/E/1B	+	-	-	+	No	This subspecies is broadly distributed in hardpan vernal pools along the east side of the Central Valley but does not occur within the Plan Area.
38. Lemmon's jewelflower Caulanthus coulteri var. lemmonii	-/-/1B	-	-		+	No	This variety is widely distributed on loose slopes in the Transverse Range in Ventura County northwards and in the inner Coast Range to Alameda County but does not occur within the Plan Area.
39. Congdon's tarplant Centromadia parryi spp. congdonii	-/-/1B	-		-	) +	No	This subspecies is broadly distributed throughout central California, does not appear to be declining, and does not occur within the Plan Area.
40. Pappose tarplant Centromadia parryi ssp. parryi	-/-/1B	1		+ (H)	+	No	While this subspecies occurs within the Suisun Marsh impacts area, it is broadly distributed throughout central California in brackish marshes, salt springs, hot springs, and other areas, does not appear to be declining, and is not likely to be listed within the period of this plan.
41. Parry's red tarplant Centromadia parryi ssp. rudis	-/-/4		+	-	+	No	This subspecies is not likely to be listed during the plan period and while it is present on alkali soils in the Sacramento Valley on USFWS and CDFG preserves, it is not expected to be affected by the covered activities.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
42. Slough thistle Cirsium crassicaule	FSC/-/1B	+	+	+ (H)	+	Yes	Meets all four criteria. Slough thistle is known from two locations in the Legal Delta, one about 5 miles west of Manteca and one about 10 miles southeast of Tracy. It is also present within in the habitat restoration area upstream of the Mossdale Bridge. It is very uncommon across its limited range in the San Joaquin Valley and subjected to numerous negative impacts which may lead to listing during the plan period.
43. Suisun thistle Cirsium hydrophilum var. hydrophilum	E/-/1B	+	+	+ (H)	+	Yes	Meets all four criteria. Suisun thistle is present within the Suisun Marsh and could be affected by habitat restoration actions.
44. Brewer's clarkia Clarkia breweri	-/-/4	_	-		+	No	This species is broadly distributed in the inner Coast Range from Monterrey County north to Alameda County but does not occur within the Plan Area.
45. Santa Clara red ribbons Clarkia concinna ssp. automixa	-/-/4	-			+	No	This subspecies is broadly distributed in the inner Coast Range from Alameda County north to Trinity County but does not occur within the Plan Area.
46. Serpentine collomia Collomia diversifolia	-/-/4		-	-	+	No	This species is broadly distributed on rocky serpentine hill slopes from Contra Costa County north to Siskiyou County but does not occur within the Plan Area.
47. Small-flowered morning-glory Convolvulus simulans	-/-/4	-	-	-	+	No	This species is broadly distributed on hill slopes from San Diego County north to Contra Costa County but does not occur within the Plan Area.
48. Hispid bird's-beak Cordylanthus mollis ssp. hispidus	-/-/1B	-	-	-	+	No	This subspecies is broadly distributed in alkaline sink habitat in the San Joaquin Valley and Livermore Valley, in alkaline seeps near Rocklin, and along the margins of alkaline seasonal wetlands and vernal pools near Travis Air Force Base in Solano County

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments but does not occur within the Plan Area.
49. Soft bird's-beak  Cordylanthus mollis  ssp. mollis	E/R/IB	+	+	+ (H)	+	Yes	Meets all four criteria. This subspecies occurs within Suisun Marsh and could be affected by habitat restoration actions.
50. Mt. Diablo bird's- beak Cordylanthus nidularius	-/SR/1B	-	-	-	+	No	This species it is known from a single occurrence on Bald Ridge within the Mt. Diablo park system and does not occur within the Plan Area.
51. Palmate-bracted bird's-beak Cordylanthus palmatus	E/E/1B	+	-	-	+	No	This species does not occur within Plan Area. CNDDB records show that the Stockton occurrence was last seen in 1881 and could not be relocated in the 1960's.
52. Hoover's cryptantha Cryptantha hooveri	-/-/1A	+	+		+	No	While this species occurs within the Plan Area it is limited to sandy areas near Antioch Dunes which are not within an impact area.
53. Livermore tarplant <i>Deinandra bacigalupi</i>	-/-/1B	_	-	-	+	No	This species occurs on alkaline soils in the Livermore Valley and does not occur within the Plan Area.
54. Hospital Canyon larkspur Delphinium californica ssp. interius	-/-/1B	-		-	+	No	This subspecies is broadly distributed in seeps and dried creek bottoms in the inner Coast Range from San Benito County north to Contra Costa County but does not occur within the Plan Area.
55. Gypsum-loving larkspur Delphinium gypsophilum ssp. gypsophilum	-/-/4			_	+	No	This subspecies is broadly distributed in the inner Coast Range from Ventura County north to Stanislaus County but does not occur within the Plan Area.
56. Recurved larkspur Delphinium recurvatum	-/-/1B	U	+	-	+	No	While there are occurrences of this species in the Clifton Court Forebay area, those occurrences are to the west of the potential impact areas in relatively undisturbed alkaline vegetation in contrast to the intensive agriculture of the impact areas. Listing potential is uncertain as while this species has a

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  broad historical distribution in the San Joaquin Valley its populations are described as very small, subject to extirpation, and many have not been surveyed for a number of years.
57. Norris' beard moss  Didymodon norrisii	-/-/2	_	-	-	+	No	This species is widespread on mesic rock outcrops from Tulare County to Humboldt County but does not occur within the Plan Area.
58. Dwarf downingia Downingia pusilla	-/-/2	-	+	+ (H)	Image: Control of the	Yes	Meets all four criteria. USFWS indicated likelihood of this species becoming listed within the term of the permit. This species is broadly distributed throughout California in seasonal marshes and vernal pools and is not likely to be listed within the period of this plan. It does occur in areas near Cache Slough and in the Stone Lakes area but those occurrences are not within impact areas.
59. Small spikerush Eleocharis parvula	-/-/4	-			+	No	This species is widely distributed from Orange County in the south to Humboldt and Lassen Counties in the north but does not occur in the Plan Area.
60. Brandegee's eriastrum Eriastrum brandegeeae	-/-/1B	-	-		+	No	This species occurs on rock outcrops and rocky soils on hill slopes from Santa Clara County to Shasta County but does not occur within the Plan Area.
61. Mt. Diablo buckwheat Eriogonum truncatum	-/-/1B	+		_	+	No	This species occurs on hill slope outcrops of the Tehama geological formation on the slopes of Mt. Diablo and in the Portrero Hills but does not occur within the Plan Area. The two CNDDB occurrences that were mapped in the Plan Area are best guesses based on very old herbarium collections and the actual collection sites were most likely on nearby hill slopes.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
62. Bay buckwheat Eriogonum umbellatum var. bahiiforme	-/-/4	_	-	_	+	No	This variety occurs on hill slopes from Los Angeles County to Siskiyou County but does not occur within the Plan Area.
63. Jepson's woolly sunflower <i>Eriophyllum jepsonii</i>	-/-/4	_	-	-	+	No	This species occurs on hill slopes and in canyons from Ventura County to Contra Costa County but does not occur within the Plan Area.
64. Delta button celery Eryngium racemosum	-/E/1B	+	+	+ (H, AD, ID, O)	+	Yes	Meets all four criteria. Delta button celery is found in riparian scrub and subalkaline swales in the San Joaquin River bed (CDFG 2000; SJ HCP 2000). It is also found in chenopod scrub and alkaline grasslands near Discovery Bay. It is covered in the San Joaquin HCP. It has the potential to occur near Clifton Court Forebay and the San Joaquin River upstream of the Mossdale Bridge.
65. Contra Costa wallflower <i>Erysimum capitatum</i> var. <i>angustatum</i>	E/E/1B	+	+		+	No	This subspecies only occurs in the Antioch Dunes which are within the Plan Area, but there is no potential for adverse effects to the species so it is not proposed for coverage.
66. Diamond-petaled California poppy Eschscholzia rhombipetala	-/-/1B		+	- (AD)	+	No	This species is broadly distributed throughout the inner central and southern Coast Range on clay soils and is not likely to be listed within the period of this plan. There is a small probability of it being present in the Clifton Court Forebay area.
67. Stinkbells Fritillaria agrestis	-/-/4	-	Ť	-	+	No	This widespread species occurs on gentle hill slopes of the Transverse Range and northward in the outer and inner Coast Ranges to Monterrey and Yolo Counties. It also occurs in the foothills of the Sierra Nevada from Tulare County to Placer County. Therefore, this species does not occur within the Plan Area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
68. Fragrant fritillary Fritillaria liliacea	-/-/1B	-	+	-	+	No	This species is broadly distributed throughout California on sites with clay soils and is not likely to be listed within the period of this plan. Additionally, occurrences in the Plan Area are in upland habitats near vernal pools that will not be impacted and there are no documented occurrences within impacts areas.
69. Adobe–lily Fritillaria pluriflora	-/-/1B	-	+	-	+	No	This species is broadly distributed on gently sloping hillsides with clay soils from Yolo County to Glenn County in the inner Coast Range and in clay soils in the uplands surrounding vernal pool complexes in Butte and Tehama Counties. There is a 1910 reported occurrence in Solano County which CNDDB attributes to an incorrect identification. Therefore, this species does not occur within the Plan Area.
70. Purdy's fritillary Fritillaria purdyi	-/-/4	-			+	No	This species is found in the inner and outer Coast Ranges from Napa county north to Humboldt County and possibly in the foothills of the Sierra Nevada in Butte County but it does not occur within the Plan Area.
71. Phlox-leaf serpentine bedstraw Galium andrewsii ssp. gatense	-/-/4	-		-	+	No	This subspecies occurs at high elevations. Most recent occurrences have been recorded in San Benito and Stanislaus counties. Other occurrences have been recorded in Santa Cruz, Contra Costa, Santa Clara, Monterey, San Luis Obispo, Fresno, and San Bernardino counties. It does not occur within the Plan Area.
72. Boggs Lake hedge– hyssop Gratiola heterosepala	-/E/1B	+	+	+ (H)	+	Yes	Meets all four criteria. Boggs Lake hedge-hyssop in vernal pools and in marshy area on the margins of reservoirs and lakes; also found in man-made habitats such as borrow pits and cattle ponds (FWS Vernal Pool Recovery Plan 2006; San Joaquin HCP

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	_
							2000). Covered in the San Joaquin, South Sacramento, and Solano HCPs. Occurs in areas near Cache Slough that are proposed for habitat restoration and, while no occurrences have been reported, may occur in the Stone Lakes area but not in impacted areas. The ISA Report recommends that this species be retained for consideration of coverage.
73. Nodding harmonia Harmonia nutans	-/-/4	-	ı	-	+	No	This species occurs on hillsides and at high elevations of the North Coast range in Lake, Sonoma, and Napa counties and does not occur within the Plan Area.
74. Diablo helianthella Helianthella castanea	-/-/1B	-			+	No	This species generally occurs on hillsides and at high elevations in San Francisco Bay counties. Most recorded occurrences have been in Contra Costa and Alameda counties. Occurrences have also been recorded in San Francisco, San Mateo, and Marin counties. This species does not occur within the Plan Area.
75. Hogwallow Starfish Hesperevax caulescens	-/-/4		+		+	No	This species is widely distributed throughout California. There are recorded occurrences from Tehama County to San Diego County. It is present within the Plan Area in large playa pools at CDFG Tule Ranch Preserve but that area will not be impacted. Because it is widely distributed throughout California (herbaria specimens) it is unlikely to be listed within the period of this plan.
76. Brewer's western flax Hesperolinon breweri	-/-/1B		+	-	+	No	Distribution of this species is limited to Napa, Contra Costa, and Solano counties but it does not occur within impacts areas. Additionally, it occurs in the inner Coast Range north and south of the Delta in areas that are not likely to be impacted by

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
77. Rose–mallow Hibiscus lasiocarpus	-/-/2	-	+	+ (H, AD, ID, O)	+	No	development so its listing potential is very low.  This species is broadly distributed throughout the Delta and Sacramento Valley in riparian areas, springs, and seeps and is not likely to be listed within the period of this plan.
78. Santa Cruz tarplant Holocarpha macradenia	E/T/1B	+	-	-	+	No	The distribution of this species is limited to several coastal counties: Marin, Santa Cruz, Monterey, Alameda, and Contra Costa but it does not occur within the Plan Area.
79. Coast iris Iris longipetala	-/-/4	-	-	-	+	No	This species has been observed in the outer Coast Range from Humboldt County to Monterey County, and in the inner Coast Range from Contra Costa County to Santa Clara County but it does not occur within the Plan Area.
80. Carquinez goldenbush Isocoma arguta	-/-/1B	+	+	+ (H)	+	Yes	Meets all four criteria. Carquinez goldenbush is present within impact areas of Suisun Marsh and Cache Slough. This shrub species in endemic to the alkaline and saline areas around the Montezuma Hills and sometimes grows along the transition between saline tidal marshes and uplands.  Because of its extremely narrow distribution and small population sizes it is likely to be listed within the period of the plan. It is also likely to be impacted by sea level rise.
81. Northern California black walnut Juglans californica var. hindsii	-/-/1B		+	+ (H, AD, ID)	+	No	This variety is widespread in the Central Valley and Delta and is not likely to be listed within the plan period.
82. Ahart's dwarf rush Juncus leiospermus var. ahartii	-/-/1B	+	_	-	+	No	The distribution of this variety is limited to vernal pools in northern California. It has been recorded from Tehama, Butte, Yuba, Placer, Calaveras, and Sacramento counties but does not occur within the

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments Plan Area.
83. Contra Costa goldfields <i>Lasthenia conjugens</i>	E/-/1B	+	+	-	+	No	This species occurs in the plan area.
84. Ferris' goldfields Lasthenia ferrisiae	-/-/4	-	+	+ (AD)	+	No	This species is widely distributed throughout California from Colusa and Butte counties in the north, to San Luis Obispo, Kern and Ventura counties in the south; and from Contra Costa and Alameda counties in the west to Merced, Fresno, and Tulare counties in the east. It does occur within the planning and impacts areas in the Clifton Court Forebay, but it is not likely to be listed during the plan period.
85. Delta tule pea Lathyrus jepsonii var. jepsonii	-/-/1B	+	+	+ (H, AD, ID, O)	+	Yes	Meets all four criteria. Delta tule pea grows in tidally influenced freshwater and brackish marshes, commonly along slough edges and levees (Solano HCP 2007; San Joaquin HCP 2000). It is covered in the Solano and San Joaquin HCPs. It is found in valley riparian, tidal perennial aquatic, tidal freshwater emergent wetland, and grasslands throughout central Plan Area. There are numerous occurrences throughout the lowland Legal Delta. It will likely be impacted by BDCP actions while possibly benefitting from habitat restoration, and may be listed within the period of this plan.
86. Legenere Legenere limosa	-/-/1B	+	+	?	+	Yes	Current covered activity and habitat restoration concepts may avoid impacts. Habitat is usually deep well defined vernal pools within grasslands (Solano HCP 2007; SJ HCP 2000). Covered in the SJ HCP and proposed for coverage in the Solano HCP. Found within Plan Area in grasslands along western border; found east and west outside of Plan Area.

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
87. Heckard's peppergrass Lepidium latipes var. heckardii	-/-/1B	+	+	?	+	Yes	Heckard's peppergrass grows on alkaline flats and in alkaline grasslands along the edges of vernal pools (Solano HCP 2007). It is proposed for coverage in the Solano HCP. The historical occurrence along Haas Slough was last observed by Jepson in 1891 (Consortium of California Herbaria 2008). Aerial imagery indicates that the Haas Slough occurrence is likely to have been extirpated by the spread of intensive agriculture along both sides of the slough. Present within the Plan Area in large playa pools at the DFG Tule Ranch Preserve and in vernal pools and swales at Jepson Prairie and Gridley Ranch Preserves, but those areas are in upland habitat that will not be affected. Current covered activity and habitat restoration concepts may affect species.
88. Bristly leptosiphon Leptosiphon acicularis	-/-/4				+	No	This species is generally found on hillsides and at high elevations. Most recent occurrences have been recorded in Mendocino, Sonoma, Lake, Napa, and Butte counties. Humboldt and Marin counties have recorded occurrences that pre–date 1950, and Alameda County's most recent recorded occurrence was in 1900. Single occurrences have been recorded in Colusa, Santa Cruz, San Benito, and San Diego counties. This species does not occur within the Plan Area.
89. Serpentine leptosiphon <i>Leptosiphon ambiguus</i>	-/-/4		-	-	+	No	This species occurs on hillsides and at high elevations. Most recorded occurrences are in central California from Contra Costa, Alameda, San Mateo, and Santa Clara counties in the west to Stanislaus and Merced counties in the east. There are single occurrences recorded for each of the following counties: Fresno, Plumas, Santa Cruz, and Tehama. This species does not occur within the Plan Area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
90. Large-flowered leptosiphon Leptosiphon grandiflorus	-/-/4	-	-	-	+	No	Most recent recorded occurrences of this species have been reported from Los Angeles, Marin, and Monterey counties. Other occurrences have been reported from Santa Clara, Santa Barbara, and Madera counties. This species does not occur within the Plan Area.
91. Spring lessingia Lessingia tenuis	-/-/4	-	-	-	+	No	This species is generally found at high elevations in central and southern California counties. Recorded occurrences are widely distributed from Alameda and Stanislaus counties south to Santa Barbara and Ventura counties. It does not occur within the Plan Area.
92. Mason's lilaeopsis Lilaeopsis masonii	-/R/1B	+	+	+ (H, ID, O)	+	Yes	Meets all four criteria. Mason's lilaeopsis grows in regularly flooded tidal zones, on mud banks and flats, and along eroding creek banks, sloughs, and rivers. It is also found in freshwater marshes, brackish marshes, and riparian scrub vegetation types that are tidally influenced. It is covered in the San Joaquin HCP and proposed for coverage in the Solano HCP.  It is broadly distributed throughout the Delta and in the Napa River and will likely benefit from habitat restoration.
93. Delta mudwort Limosella subulata	-/-/2	+	+	+ (H, ID, O)	+	Yes	Meets all four criteria. Habitat consists of muddy or sandy intertidal flats in estuarine areas, surrounded by brackish or freshwater marsh or riparian scrub (SJ HCP 2000; Solano HCP 2007). Covered in the San Joaquin HCP and proposed for coverage in the Solano HCP. Generally found throughout the central Plan Area within valley riparian, tidal perennial aquatic, tidal freshwater emergent wetland, and grassland SAIC veg. types. A later assessment found that all of

		S	election Crite	eria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
							the numerous known occurrences are in the Legal Delta lowland areas.
94. Hoover's lomatium  Lomatium hooveri	-/-/4	-	-	_	+	No	This species occurs at high elevations in Colusa, Lake, Glenn and Napa counties and does not occur within the Plan Area.
95. Napa lomatium Lomatium repostum	-/-/4	_	-	_	+	No	This species is distributed on hillsides and at high elevations in Lake, Napa, Solano and Sonoma counties and does not occur within the Plan Area.
96. Showy madia Madia radiata	-/-/1B	+	+		+	No	This species occurs on hillsides and at high elevations. Recent recorded occurrences have been in southern central California in the counties of San Benito, Monterey, San Luis Obispo, Fresno, and Kern. There have also been recorded occurrences in Kings, Contra Costa, San Joaquin, and Stanislaus counties but this species does not occur within the plan and impacts areas.
97. Hall's bush–mallow Malacothamnus hallii	-/-/1B	-		-	+	No	Most of the recent recorded occurrences of this species have been on hillsides in Contra Costa and Santa Clara counties, but occurrences have also been recorded in Stanislaus, Merced, San Mateo, and Mendocino counties. This species does not occur within the Plan Area.
98. Heller's bush– mallow Malacothamnus helleri	-/-/4	-		-	+	No	This species has been observed on hillsides in Colusa and Napa counties and does not occur within the Plan Area.
99. Sylvan microseris Microseris sylvatica	-/-/4		-	-	+	No	This species is widely distributed on hillsides throughout California. It has been observed as far north as Tehama County, as far west as Napa County, as far south as Los Angeles County, and as far east as Inyo County. However, it does not occur within the Plan Area.

		Selection Criteria For Coverage <sup>B</sup>					
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
100. Sierra monardella Monardella candicans	-/-/4	-	-	-	+	No	This species is widely distributed – primarily on hillsides of the Sierra Nevada. It has been observed as far north as Placer County and as far south as San Bernardino County. There is also an undated record of this species in St. Helena in Napa County. This species does not occur within the Plan Area.
101. Green monardella Monardella viridis ssp. viridis	-/-/4	-	1	-	+	No	This subspecies has been observed on hillsides of the North Coast Range in Sonoma, Lake and Napa counties. It has also been recorded as occurring in the San Gabriel Mountains region in San Bernardino County. This species does not occur within the Plan Area.
102. Little mousetail  Myosurus minimus ssp.  apus	-/-/3	_	+	+ (H)	+	No	This subspecies is found in southern California with occurrences recorded only in San Diego and Riverside counties.
103. Cotula navarretia Navarretia cotulifolia	-/-/4	-	+	+ (H)	+	No	This species is widely distributed throughout central and northern California. Its range extends from Lake and Glenn counties in the north to Sonoma and Marin counties in the west to San Benito County in the south and Sutter County in the east.
104. Hoary navarretia Navarretia eriocephala	-/-/4	-	+	-	+	No	This species occurs throughout central California from Glenn, Lake and Yuba counties in the north to Stanislaus and Tuolumne counties in the south. It does occur in the Plan Area in the Jepson Prairie area, but not within the impacts areas.
105. Jepson's navarretia Navarretia jepsonii	-/-/4		-	_	+	No	This species has been observed on hillsides in northern and central California counties Tehama, Glenn, Colusa, Lake, Napa, Sonoma, and Placer but it does not occur within the Plan Area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
	Status <sup>A</sup>			Potential to			
	(Federal/		Occurrence	be		Consider	
Common Name	State/	Listing	in the Plan	Adversely	Sufficient	for	
Scientific Name	CNPS)	Potential	Area	Affected <sup>C</sup>	Information	Coverage?	
106. Baker's navarretia Navarretia leucocephala ssp. bakeri	-/-/1B	+	+	_	+	No	This subspecies has been observed in vernal pool and swales in northern California counties from Mendocino and Tehama in the north to Marin, Napa, and Solano in the south. It is present within the Plan Area in large playa pools at CDFG Tule Ranch Preserve and in vernal pools and swales at Jepson Prairie and Gridley Ranch Preserves, but those areas are in upland habitat that will not be impacted.
107. Pincushion	-/-/1B	+	_	-	+	No	This subspecies has been observed in vernal pools in
navarretia Navarretia myersii ssp. myersii							Sacramento, Placer, Amador, Calaveras, and Merced counties but it does not occur within the Plan Area.
108. Adobe navarretia Navarretia nigelliformis ssp. nigelliformis	-/-/4	-	-		+	No	This subspecies is widespread throughout central California from Butte County in the north to Kern County in the south, but there have been no recorded occurrences within the counties included in the Plan Area.
109. Prostrate vernal pool navarretia Navarretia prostrata	-/-/1B	-		-	+	No	This species is broadly distributed in southern and central California. The northernmost counties in which it has been observed are Alameda and Merced. It does not occur within the Plan Area.
110. Colusa grass Neostapfia colusana	T/E/1B	+	+	_	+	No	This species is present within the Plan Area in large playa pools at the Jepson Prairie Preserve but that area is upland habitat that will not be impacted.
111. Antioch Dunes evening primrose Oenothera deltoides ssp. howellii	E/E/1B	+	+	-	+	No	This subspecies only occurs in the Antioch Dunes and does not occur within impact areas. In the absence of potential for adverse affects, coverage is not necessary.
112. San Joaquin Valley Orcutt grass Orcuttia inaequalis	T/E/1B	+	_	_	+	No	With the exception of a single population near Travis Air Force Base in Solano County, this species is distributed in large vernal pools on the east side of the San Joaquin Valley and it does not occur within

		S	election Crite	ria For Cover	age <sup>B</sup>		
	Status <sup>A</sup>			Potential to			
	(Federal/		Occurrence	be		Consider	
Common Name	State/	Listing	in the Plan	Adversely	Sufficient	for	
Scientific Name	CNPS)	Potential	Area	Affected <sup>c</sup>	Information	Coverage?	Coverage Comments
							the Plan Area.
113. Hairy Orcutt grass Orcuttia pilosa	E/E/1B	+	ı	-	+	No	This species occurs in large vernal pools and playas on the eastern margin of the Central Valley north and south of the Delta and does not occur within the Plan Area.
114. Slender Orcutt grass Orcuttia tenuis	T/E/1B	+	1	-	+	No	This species occurs in vernal pools and vernally wet areas in Lake County, the eastern side of the Sacramento Valley, and the Modoc Plateau and does not occur within Plan Area.
115. Sacramento Orcutt grass <i>Orcuttia viscida</i>	E/E/1B	+	ı	-	+	No	This species occurs in hard-pan vernal pools on the eastern edge of Sacramento County and does not occur within the Plan Area.
116. Gairdner's yampah Perideridia gairdneri ssp. gairdneri	-/-/4	-	-		+	No	This subspecies is widely distributed throughout California. It has been observed as far north as Humboldt and Siskiyou counties and as far south as Kern and Orange counties but it does not occur within the Plan Area.
117. Mt. Diablo phacelia <i>Phacelia phacelioides</i>	-/-/1B	-		-	) +	No	This species occurs at high elevations of the inner Coast Range and does not occur within the Plan Area.
118. Michael's rein orchid Piperia michaelii	-/-/4	U		-	+	No	This species is widely distributed throughout California. It has been observed in coastal counties from Humboldt to Los Angeles and in inland counties from Butte to Tulare. However, it does not occur within the Plan Area.
119. Hairless popcorn- flower Plagiobothrys glaber	-/-/1A	U	-	-	+	No	Herbarium collections of this species are mostly very old and its current status is unknown. The collections are from heavy alkaline clays in the south San Francisco Bay area and from scattered alkaline seeps in the inner Coast Range from the Livermore Valley to San Benito County. Therefore, this species does not occur within the Plan Area.

		Selection Criteria For Coverage <sup>B</sup>			age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
120. Bearded popcorn- flower Plagiobothrys hystriculus	-/-/1B	+	+	-	+	No	This species is present within the Plan Area in vernal pools and swales at Jepson Prairie and Gridley Ranch Preserves, but those areas are in upland habitat that will not be impacted. It is endemic to a small area of Solano County from Gridley Ranch to the Montezuma Hills.
121. Marin knotweed Polygonum marinense	-/-/3	-	-	+ (H)	+	No	This species is present in the Suisun Marsh, but it is a widespread species in central California salt marshes in Marin, Sonoma, Napa, and Solano counties.
122. Eel–grass pondweed Potamogeton zosteriformis	-/-/2	-	+	+ (H, ID, O)	+	No	This species is not likely to be listed within the plan period as it is widely distributed in northern California (Consortium of California Herbaria 2008).
123. Delta woolly- marbles Psilocarphus brevissimus var. multiflorus	-/-/4	-	+		+	No	This variety is widespread in vernal pools found in central California counties from Butte and Glenn counties in the north to Santa Clara and Stanislaus counties in the south. It is also likely to be present in vernal pools in the Jepson Prairie area, but that upland area will not be impacted.
124. Lobb's Aquatic Buttercup Ranunculus lobbii	-/-/4	-	U	U	+	No	This species is widespread in vernal pools found from Mendocino and Lake counties in the north to Monterey County in the south. It is not present in the Jepson Prairie area but may be present at the Tule Ranch Preserve, but that upland area will not be impacted.
125. Victor's gooseberry Ribes victoris	-/-/4		-	_	+	No	This species is found on hillsides of the Coastal Ranges of northern and central California and it does not occur within the Plan Area.
126. Sanford's arrowhead Sagittaria sanfordii	-/-/1B	_	+	+ (H, AD, ID, 0)	+	No	This species is broadly distributed in the Central Valley (CNDDB, Consortium of California Herbaria 2008) and is unlikely to be listed during the plan

Evaluation of Species Considered for Coverage

Appendix 1.A

	Selection Criteria For Coverage <sup>B</sup>						
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>C</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments period.
127. Rock sanicle Sanicula saxatilis	-/SR/1B	_	_	_	+	No	This species occurs at high elevations of the inner Coast Range does not occur within the Plan Area.
128. Marsh skullcap Scutellaria galericulata	-/-/2	-	+	+ (H, AD, ID, O)	+	No	This species is broadly distributed in wet soils in central and northern California from Siskiyou and Modoc counties in the north to Inyo County in the south.
129. Side-flowering skullcap Scutellaria lateriflora	-/-/2	U	+	+ (H, AD, ID, O)	U	Yes	Though it does not meet all four criteria, due to this species' rarity and dependence on limited specialized habitat that is found in the Plan Area, it is proposed for coverage under the BDCP. There are only three reported occurrences of this species: one herbarium collection from Santa Clara that was recently determined to be this species; an 1882 collection from Bouldin Island, and; a 1999 collection at Delta Meadows River Park, (Consortium of California Herbaria 2008).
130. Rayless Ragwort Senecio aphanactis	-/-/2	-		-	, +	No	This species is widely distributed on hillsides of California coastal ranges from the inner Coast Ranges in Solano County to the Peninsular Ranges in San Diego County and does not occur within the Plan Area.
131. Most beautiful jewel–flower Streptanthus albidus ssp. peramoenus	-/-/1B	-		_	+	No	This subspecies occurs on rocky serpentine slopes of the coast range from Contra Costa County to San Luis Obispo County, and does not occur within the Plan Area.
132. Mt. Diablo jewel– flower Streptanthus hispidus	-/-/1B	-	-	_	+	No	This species is found at high elevations of Mount Diablo in Contra Costa County does not occur within the Plan Area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments
133. Suisun Marsh aster Symphyotrichum lentum	-/-/1B	+	+	+ (H, AD, ID, O)	+	Yes	Meets all four criteria. Suisun Marsh aster grows in brackish and freshwater marshes and along the banks of sloughs and watercourses. It has been observed growing with common reed, cattails, bulrushes, and blackberry (Solano HCP 2007). It is covered in the Solano and San Joaquin HCPs. It is found in valley riparian, tidal perennial aquatic, tidal freshwater emergent wetland, managed seasonal wetland, grassland, agricultural, and developed. There are numerous occurrences in the Legal Delta, particularly near the Sacramento River, San Joaquin River, and tributaries and in the vicinity of Pittsburg, Antioch, and Big Break going eastward. Broadly distributed throughout the Delta and in the Napa River, will likely benefit from habitat restoration.
134. Wright's trichocoronis <i>Trichocoronis wrightii</i>	-/-/2	_	+	+ (H, AD)	+	No	Both the Jepson Manual and the Flora of North America state that this species is not native to California, but is instead native to Texas and Mexico.
135. Showy indian clover <i>Trifolium amoenum</i>	E/-/1B	+			+	No	This species is known from two extant occurrences near Tomales Bay and Bodega Bay and a few historical occurrences near Fairfield. It does not occur within the Plan Area.
136. Saline clover Trifolium depauperatum var. hydrophilum	-/-/1B		+	U (H, AD)	+	No	This variety is widely distributed in central California coastal counties, and it is not likely to be listed during the duration of the plan (CNDDB, Consortium of California Herbaria 2008). Known from the Plan Area at CDFG Tule Ranch, could be in the impacts area of the Suisun Marsh and Cache Slough but surveys have not found it in the Jepson Prairie area. Could also be in the vicinity of the Clifton Court Forebay impacts area.

		S	election Crite	ria For Cover	age <sup>B</sup>		
Common Name Scientific Name  137. Coastal triquetrella	Status <sup>A</sup> (Federal/ State/ CNPS)	Listing Potential	Occurrence in the Plan Area	Potential to be Adversely Affected <sup>c</sup>	Sufficient Information	Consider for Coverage?	Coverage Comments  This species is widely distributed from Laguna
Triquetrella californica	7 715				·	110	Mountain in San Diego County to the Coast Range of central California to the North Coast but does not occur within the Plan Area.
138. Dark-mouthed triteleia <i>Triteleia lugens</i>	-/-/4	-	-	-	+	No	This species occurs at high elevations. Recent occurrences have been recorded in the Coastal Range from Napa to Monterey. Other occurrences have been recorded in the Sierra Nevada in Plumas, El Dorado, and Mariposa counties; and several occurrences have been recorded Lake, Fresno, and Los Angeles counties. It does not occur within the Plan Area.
139. Caper–fruited tropidocarpum <i>Tropidocarpum</i> capparideum	-/-/1B	+	+	(AD)	+	Yes	Meets all four criteria. Caper–fruited tropidocarpum grows on alkaline flats and low alkaline hills within valley and foothill grassland (San Joaquin HCP 2000; CNDDB 2008). It is covered in the San Joaquin HCP. Historical occurrences are within Plan Area at the Clifton Court Forebay but no current occurrences are documented from that area. The ISA Report recommends that this species be eliminated from consideration for coverage. However, this species is very rare and appears to have a long–lived seed bank that may be present in the Clifton Court Forebay impacts areas.
140. Greene's tuctoria Tuctoria greenei	E/R/1B	+		1	+	No	This species occurs in large playa type vernal pools on the east side of the Sacramento Valley. None of these occurrences are within Plan Area.
141. Solano grass Tuctoria mucronata	E/E/1B	+	-	_	+	No	This species is not present within Plan Area. The Olcott Lake population has been extirpated and the existing populations in Solano and Yolo Counties are outside of the project and impacts areas.

Evaluation of Species Considered for Coverage Appendix 1.A

		Selection Criteria For Coverage <sup>B</sup>			age <sup>B</sup>		
	Status <sup>A</sup>			Potential to			
	(Federal/		Occurrence	be		Consider	
Common Name	State/	Listing	in the Plan	Adversely	Sufficient	for	
Scientific Name	CNPS)	Potential	Area	Affected <sup>c</sup>	Information	Coverage?	Coverage Comments
142. Oval-leaved	-/-/2	-	_	_	+	No	This species is widely distributed from the North
viburnum							Coast-Klamath Region to the inner Coast Range and
Viburnum ellipticum							Sierra Nevada but does not occur within the Plan
·							Area.

# <sup>A</sup> Status Explanations

### **Federal**

E = listed as endangered under the federal Endangered Species Act (ESA)

T = listed as threatened under the federal ESA

C = candidate for listing under the federal ESA

BCC = U.S. Fish and Wildlife Service bird of conservation concern

NSC = National Marine Fisheries Service species of concern

- = no status

#### State

E = listed as endangered under the California ESA

T = listed as threatened

C = Candidate for listing under CESA

SSC = California species of special concern

FP = fully protected under the California Fish and Game Code

R = listed as rare under the California Native Plant Protection Act

– = no status

#### B Criteria met or not

- + = Species meets the selection criterion
- = Species does not meet the selection criterion

U = Uncertain whether species meets selection criterion. More investigation required.

<sup>c</sup> **BDCP Actions** (covered activities and conservation measures) potentially adversely affecting the species

H = habitat restoration actions

ID = in-Delta conveyance facilities

AD = around-Delta conveyance facilities

0 = water operations

## **California Native Plant Society (CNPS)**

1A = presumed extinct in California

1B = rare or endangered in California and elsewhere

2 = rare and endangered in California, more common elsewhere

3 = species lacking sufficient information to determine status

4 = limited distribution, low threats at this time

-= no status